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Delivering transportation projects; providing public information and serving as a dynamic forum for regional planning and collaboration in the greater Sacramento Metropolitan Area.

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1 What is a form-based code? ................................................................. 17
2 Developing a form-based code ......................................................... 57
3 Case studies .................................................................................... 79

Purpose of the handbook ................................................................... 9

FAQ’s .................................................................................................. 7

TABLE OF CONTENTS
What is the purpose of the Form-Based Code (FBC) Handbook?
The handbook was created to provide background information about the form-based code approach and provide instructions on how communities can create and develop a form-based code to better address specific community planning issues. Because the successful implementation of the SACOG Blueprint Growth Principles will rely in part on land development regulations, especially related to design, a form-based code is a potentially valuable tool for shaping community character consistent with these principles.

What are Form-Based Codes (FBC’s)?
Form-based codes are development regulations used by local government agencies that emphasize the physical character of development and de-emphasize the regulation of land use. They provide greater predictability about the look and feel of development and offer developers a clearer understanding of what the community seeks. In return, FBCs can make it easier for citizens to help create the physical development they want, which will more likely lead to their acceptance of development and street designs in their community.

How do FBCs differ from conventional zoning codes?
Most local governments in the United States use conventional zoning codes as the tool to regulate land use and development. Because the original purpose of zoning was to prevent incompatible uses from moving into the neighborhood, conventional zoning regulations are often reactive, focusing on what is not allowed. Zoning requirements are usually applied generically throughout the entire community.

Conventional zoning regulations are often applied in a one-size-fits-all manner, without any specific planning or thought about what the community wants development character to be. Although the resulting development may be “compatible” in terms of density, for example, it can often be incompatible with the physical context of the surrounding neighborhood.

Conventional zoning ordinances typically leave street design standards to the city engineer or public works department. These standards are normally based on general street classification (arterial, collector, and local) with no special consideration of how the standards relate to the different areas the streets serve. For example, it is common for an arterial street to have the same design as it travels through employment, commercial, and residential districts.

Form-based codes differ from conventional zoning because they:
1. Are the result of a public design process, which creates a clear and articulate vision for a defined district or neighborhood.

<table>
<thead>
<tr>
<th>a quick comparison...</th>
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<tbody>
<tr>
<td><strong>Conventional Zoning</strong></td>
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<tr>
<td>Often applied universally throughout a jurisdiction</td>
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</tr>
<tr>
<td>Text-based presentation</td>
</tr>
</tbody>
</table>
2. Pay greater attention to the design of the public realm and the importance that streetscape design and individual building character have in defining public spaces and a special sense of place.

3. Emphasize site design and building form over density and use regulations. Form-based codes pay more attention to the buildings, which will last many years, instead of uses that change over time.

4. Encourage a mix of uses and housing types to reduce the need to travel as part of one’s daily routine.

5. Make much greater use of illustrations to explain important design elements, rather than relying on numeric standards and text.

**What are the advantages of an FBC?**

The primary advantages of the form-based code approach include:

1. Encouraging active public participation in creating the regulating plan and related design elements. This public participation and consensus building at the beginning increases public understanding of the plan and its desired results, thereby reducing misunderstanding and conflict during implementation.

2. Focusing on what the community wants and not what it dislikes. This attention to what is desired makes it much easier for developers, citizens, and decision-makers to be “on the same page” when individual development projects are proposed.

3. Providing information that is easier to use than conventional zoning codes because it is shorter, more concise, and emphasizes illustrations over text. Therefore, form-based codes are more engaging and comprehensible to non-professionals.

4. Tailoring the requirements to fit a specific place or neighborhood by reflecting its vernacular architecture and overall character.

**Are FBCs being used and are they effective?**

Yes. Form-based codes have been developed and are being applied in an increasing number of communities. Some are being applied city-wide, and many focus on specific development areas or districts. The handbook includes several examples of adopted FBCs.

**What is in the handbook?**

The handbook has three sections:

- **Section 1 – What Is a Form-Based Code?**
  
  The form-based code techniques are described and compared to conventional zoning practices.

- **Section 2 – Creating a Form-Based Code**
  
  The general process and recommendations to develop an FBC are provided, along with suggestions for integrating it with a community’s zoning and development regulations.

- **Section 3 - Case Studies**

  In recognition of the diversity of development patterns within the Sacramento region, SACOG selected four case study locations with very different characteristics and planning issues: Alkali Flat (Sacramento), Old Auburn Highway (Citrus Heights), a large site greenfield development known as Creekview (Roseville), and a small town main street and residential area (Auburn).
Purpose of the handbook
Facilitating implementation of the Blueprint

The six-county Sacramento region is growing steadily. The growth is in large part a result of the over one-half million new jobs the region will create between 2000 and 2035. With those jobs, the population is expected to grow by one million residents during the same time span.

Local governments in El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties are faced with the twin challenges of managing the growth while preserving and enhancing the livability of their communities. It is possible to do both, but the local governments realize that it will take regional coordination and a new approach to managing growth.

Through the Sacramento Regional Council of Governments (SACOG), the region’s cities and counties have joined together to implement a set of growth principles for the region. In 2004, the SACOG board approved the Blueprint Plan, which sets a new course featuring better growth management, more compact urban form, greater mix of land uses, retention of open spaces and natural resources, and enhanced transportation choices.

The Blueprint Growth Principles are simple and sound. It is the implementation of these principles that is complex. Citizens can easily support the principle of compact growth at a regional scale, but balk when the implementation of that principle requires higher density development in their city and neighborhood. Citizens want walkable streets and access to transit, but resist changes in street designs that may slow traffic. City officials are caught between their support for smart growth principles at a regional level and the political consequences of implementing those principles locally.

Local planners and elected officials also lack the right tools for implementation of the Blueprint Growth Principles. Density can be acceptable if it’s well designed. Streets can be both walkable and vehicle-friendly if care is taken in their design. Conventional zoning codes and street design manuals emphasize function, not form. The emphasis is on separating uses, not integrating them. Conventional codes do not always consider what people see and experience—the look of the structure or the comfort of the street when they are walking.
Form-based codes

One of the alternatives to a conventional zoning code is a form-based code. Form-based codes emphasize the form of development and de-emphasize the use. They provide greater predictability about the look and feel of development and can make it easier for citizens to accept a change in development and street designs in their community.

SACOG conducted a study to evaluate the feasibility of developing a model form-based code to help local governments address their specific land use and urban design issues. This study concluded with a report in 2006 titled Removing Obstacles to Blueprint Implementation: Scoping Services for Model Form-Based Code or Alternative Strategy. It concluded that a form-based code approach could be a valuable tool for creating better communities in the Sacramento area.

what is a form-based code?

CONVENTIONAL ZONING VS. FORM-BASED CODES

CONVENTIONAL ZONING CODES THAT FOCUS ON USE RESULT IN ENVIRONMENTS WHERE LITTLE ATTENTION IS GIVEN TO THE PUBLIC REALM (ABOVE).

FORM-BASED CODES PLACE GREATER EMPHASIS ON BUILDING FORM AND THE RELATION OF BUILDINGS TO THE PUBLIC REALM, CREATING HIGHER QUALITY PUBLIC SPACES (BOTTOM).
Blueprint growth principles

The Preferred Blueprint Scenario is based on seven Growth Principles:

► **Transportation Choices** by designing development to encourage walking, bicycling, taking transit, or carpooling.

► **Mixed-Use Developments** that feature a variety of residential, commercial, employment, and/or civic uses near each other creating active, vital neighborhoods.

► **Compact Development** that utilizes land more efficiently and promotes a variety of transportation modes.

► **Housing Choice and Diversity** to provide a range of housing types – single family, apartments, condominiums, etc. – to accommodate the needs of different households and incomes.

► **Use of Existing Assets** to fully utilize existing urban land and infrastructure.

► **Quality Design** to create pleasant and inviting public spaces and transportation facilities that create a sense of community.

► **Natural Resources Conservation** that includes public open space, protection of environmentally sensitive areas, and retention of resource lands.

Developments should be designed to encourage people to sometimes walk, ride bicycles, ride the bus, ride light rail, take the train, or carpool. Use of Blueprint growth concepts for land use and right-of-way design will encourage use of these modes of travel and the remaining auto trips will be, on average, shorter.

Well planned and designed mixed use developments encompass all of the elements of the other growth principles. Buildings, homes and shops, entertainment, office and even light industrial uses near each other create active, vital neighborhoods, or villages. These types of projects function as local activity centers, contributing to a sense of community, where people tend to walk or bike to destinations and interact more with each other. Examples include: a housing project located near an employment center, a small shopping center located within a residential neighborhood, and a building with ground floor retail and apartments or condominiums on the upper floor(s).
compact development

Creating environments that are more compactly built and that use space in an efficient but aesthetic manner can encourage more walking, biking, and public transit use, and shorten auto trips.

housing choice and diversity

Providing a variety of places where people can live—apartments, condominiums, townhouses, and single-family detached homes on varying lot sizes—creates opportunities for the variety of people who need them: families, singles, seniors, and people with special needs. This issue is of special concern for the people with very low-, low-, and moderate-income, often our teachers, other public employees and professionals, as well as retail employees, service workers and other people for whom finding housing close to work is challenging. By providing a diversity of housing options, more people have a choice.
In urbanized areas, development on infill or vacant lands, intensification of the use of under-utilized parcels (for example, more development on the site of a low-density retail strip shopping center), or redevelopment can make better use of existing public infrastructure. This can also include rehabilitation and reuse of historic buildings, denser clustering of buildings in suburban office parks, and joint use of existing public facilities such as schools and parking garages.

### Use Existing Assets

### Design for Quality

The design details of any land use development—such as the relationship to the street, setbacks, placement of garages, sidewalks, landscaping, the aesthetics of building design, and the design of the public right-of-way (the sidewalks, connected streets and paths, bike lanes, the width of streets)—are all factors that can influence the attractiveness of living in a compact development and facilitate the ease of walking and biking to work or neighborhood services. Good site and architectural design is an important factor in creating a sense of community and a sense of place.

### Natural Resources Conservation

This principle encourages the incorporation of public-use open space (such as parks, town squares, trails, and greenbelts) within development projects, over and above state requirements. It also includes wildlife and plant habitat preservation, agricultural preservation and promotion of environment-friendly practices such as energy efficient design, water conservation and stormwater management, and shade trees to reduce the ground temperatures in the summer.
Providing guidance to cities and counties

Assistance to local communities

This handbook was created to provide background information about the form-based code approach and to provide the tools for communities to develop appropriate form-based techniques to address specific community planning issues. As will be explained in more detail in this handbook, a form-based code is much more focused on the design of the built environment and the public realm than a conventional zoning ordinance. Because the successful implementation of the Blueprint Growth Principles will rely in part on land development regulations, which are more attuned to design, a form-based code is a potentially valuable tool for shaping community character consistent with these principles. The handbook has three sections:

- **Section 1 - What is a form-based code?** The form-based code techniques are described and compared with conventional zoning practices.

- **Section 2 – Creating a form-based code.** The general process and recommendations to develop a form-based code are provided, along with suggestions for integrating it with a community’s zoning and development regulations.

- **Section 3 - Case studies.** In recognition of the diversity of development patterns within the Sacramento region, SACOG selected four case study locations with very different characteristics and planning issues: Alkali Flat (Sacramento), Old Auburn Highway (Citrus Heights), a large site greenfield development known as Creekview (Roseville), and a small town main street and residential area (Auburn).

### THE CASE STUDIES

**Urban Infill**
Sacramento Alkali Flat

**Small Downtown Infill**
Auburn

**Suburban Infill**
Citrus Heights

**Greenfield Development**
Roseville

The four case study communities provide examples of different conditions that can be addressed through a form-based code.
What is a form-based code?
Conventional zoning vs. form-based code

Conventional zoning was developed to protect property values by separating incompatible uses in a particular area or district. This separation was typically accomplished by creating single or limited use zones, which segregated different land uses, such as residential and commercial. Development with spatially separate land uses became the norm. This separation of uses, along with the automobile becoming the preeminent transportation mode, created the character of suburban communities we have today. Many zoning ordinances originated during the ‘50s and ‘60s, and although virtually all have been amended since then, most retain the principles of segregating land uses and neglecting all transportation modes except the automobile. Examples include commercial zones, which prohibit residential uses, or development regulations that have detailed automobile parking standards but no on-site circulation requirements for pedestrians.

Because the original purpose of zoning was to prevent incompatible uses moving into the neighborhood, zoning regulations are often reactive, focusing on what is not allowed. These standards and design requirements are usually applied generically throughout the entire community. This preoccupation with separating incompatible uses often bears no relationship to the real transportation or land use issues in the community.

A second important characteristic of conventional zoning is the use of numerical parameters to regulate development form. These include floor area ratios (FARs), dwelling units per acre, building heights and setbacks, and parking ratios. These indirectly affect development form, but not in a manner that is easily visualized or predictable. Zoning regulations are often applied in a one-size-fits-all manner, without any specific planning or thought about what the community wants development character to be. Although the resulting development may be “compatible” in terms of density, for example, it can often be incompatible with the context of the surrounding neighborhood.
**a conventional zoning table**

<table>
<thead>
<tr>
<th>District</th>
<th>Minimum Required</th>
<th>Maximum #Floor Area Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1, R2*</td>
<td>150.0</td>
<td>0.50</td>
</tr>
</tbody>
</table>

* R2A and R2X are subject to the provisions of paragraph (b).

<table>
<thead>
<tr>
<th>District</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Required #Open Space</th>
<th>Maximum #Floor Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>R2A</td>
<td>30</td>
<td>70</td>
<td>50</td>
<td>0.50</td>
</tr>
<tr>
<td>R2X</td>
<td>governed by yard requirements</td>
<td>35</td>
<td>65</td>
<td>0.50</td>
</tr>
<tr>
<td>R3-1, R3-2</td>
<td>governed by yard requirements</td>
<td>45</td>
<td>55</td>
<td>0.75</td>
</tr>
<tr>
<td>R3A, R3X</td>
<td>governed by yard requirements</td>
<td>45</td>
<td>55</td>
<td>0.50</td>
</tr>
<tr>
<td>R4</td>
<td>governed by yard requirements</td>
<td>55</td>
<td>45</td>
<td>0.90</td>
</tr>
<tr>
<td>R4A, R4-1</td>
<td>governed by yard requirements</td>
<td>55</td>
<td>45</td>
<td>0.75</td>
</tr>
<tr>
<td>R4B</td>
<td>governed by yard requirements</td>
<td>55</td>
<td>45</td>
<td>1.25</td>
</tr>
<tr>
<td>R5</td>
<td>governed by yard requirements</td>
<td>55</td>
<td>45</td>
<td>1.25</td>
</tr>
<tr>
<td>R5A</td>
<td>governed by yard requirements</td>
<td>55</td>
<td>45</td>
<td>1.10</td>
</tr>
<tr>
<td>R5B</td>
<td>55</td>
<td>45</td>
<td>1.35</td>
<td></td>
</tr>
<tr>
<td>R5D</td>
<td>60*</td>
<td>40*</td>
<td>2.00</td>
<td></td>
</tr>
</tbody>
</table>

* For corner lots, the maximum #lot coverage shall be 80 percent and the minimum required #open space shall be 20 percent.
Third, conventional zoning ordinances deal with private development, but typically do not include standards for the design or character of the streets that serve it. These standards are usually left to the city engineer or public works department. Street standards are normally created with a distinct deference to accommodating automobile traffic. They are based on general street classification (arterial, collector, and local) with no special consideration of how these standards relate to the different areas the streets serve. For example, it is common for an arterial street to have the same design as it travels through employment, commercial, and residential districts in a city.

This general application of development and street standards does not allow zoning ordinances to promote development envisioned by community plans. In fact, zoning regulations often undermine the very plans they are supposed to support. Conventional zoning has often has led to dysfunctional communities, which exhibit many of the traits the Blueprint Plan hopes to avoid in the future, including:

- Separation of uses related to daily activity (e.g., home, school, and work);
- Limited transportation choices;
- Few distinct centers or downtown districts;
- Low density development and relatively limited housing choices; and
- Excessive land consumption.
using form-based codes to transform the public realm

USING FORM-BASED CODES TO TRANSFORM THE PUBLIC REALM

FORM-BASED CODES TYPICALLY INCLUDE STANDARDS FOR THE DESIGN AND CHARACTER OF PUBLIC STREETS, THEREBY TAKING A STRONGER ROLE IN SHAPING THE PHYSICAL ENVIRONMENT THAN A CONVENTIONAL ZONING CODE. THIS PHOTO SIMULATION OF THE 65TH STREET AREA ILLUSTRATES HOW BUILDING DESIGN AND STREETSCAPE STANDARDS CAN TRANSFORM THE PUBLIC REALM.
Form-based code: implementing a vision

Form-based codes differ from conventional zoning because they:

1. Are the result of a public design process, which creates a clear and articulate vision for a defined district or neighborhood. A form-based code is developed as an outcome of this process to help implement the vision.

2. Pay greater attention to the design of the public realm and the importance that streetscape design and individual building character have in defining public spaces and a special sense of place. Of special significance is the integration of street standards with the desired physical character of the abutting development.

PUBLIC DESIGN PROCESS

Public design process

In order to ensure that a clear and articulate vision is formed for the planning area, form-based codes are the result of a thorough public design process.

THE PUBLIC REALM

Public realm

Form-based codes focus on the design of the public realm as well as individual building design, resulting in more unified and coherent public spaces.
3. Emphasize site design and building form over density and use regulations. Form-based codes pay more attention to the buildings, which will last many years, instead of the uses, which change over time.

4. Encourage a mix of uses and housing types to reduce the need to travel as part of one’s daily routine.
5. Make much greater use of **illustrations** to explain important design elements rather than relying on numeric standards and text.

**ILLUSTRATING THE STANDARDS**

Detailed illustrations help to clearly communicate a community’s desired vision for the development and design of its various neighborhoods and centers.
Advantages of the form-based code approach

To some extent, all of the seven Blueprint Growth Principles must rely upon thoughtful design solutions to be successful. For example, providing transportation choices involves more than just furnishing sidewalks and bike lanes. It requires locating different uses and destinations closer together, carefully designing streetscapes, and integrating private and public development to create a safe and inviting public realm. This careful attention to detail represents the overall strength of a well-executed form-based code. Additionally, some other notable advantages of the form-based code approach include:

1. Encouraging active public participation in creating the regulating plan and related design elements. This public participation and consensus building at the beginning increases public understanding of the plan and its desired results, thereby reducing misunderstanding and conflict during implementation.

2. Focusing on what the community wants and not what it dislikes. A form-based code offers an alternative regulatory approach for successfully reaching planning objectives embodied in the Blueprint Growth Principles and local general plans by shifting the focus to the desired physical character of development. For example, the public’s desire for pedestrian-friendly environments is often related to the design and physical relationships of buildings and public spaces. An FBC provides a means to get to the heart of these types of community concerns and plan for them. This attention to what is desired makes it much easier for developers, citizens, and decision-makers to be “on the same page” when individual development projects are proposed. With form-based codes, the community can offer its preferences on a variety of issues that relate to the community’s physical appearance: architectural design, street design, building orientation, how to address different housing needs, and how to manage growth in general.

3. Providing information that is easier to use than conventional zoning codes because it is shorter, is more concise, and emphasizes illustrations over text. Therefore, form-based codes are more engaging and comprehensible to non-professionals.

4. Tailoring the requirements to fit a specific place or neighborhood by reflecting its vernacular architecture and overall character.

When to apply a form-based code

A form-based code may be applied in a wide variety of circumstances ranging from specific development sites to an entire city. Examples include downtown master plans, neighborhood revitalization plans, specific plan development standards, and transit-oriented developments. It is particularly useful in planning areas where the physical character of public spaces and buildings is critical to achieving community planning goals.

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<th>Form-Based Code</th>
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<td>Connects urban form and land use</td>
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<tr>
<td>Development standards inadvertently or intentionally discourage compact, mixed-use, and pedestrian-friendly development</td>
<td>Primary focus is on achieving compact, mixed-use, and pedestrian-friendly development</td>
</tr>
<tr>
<td>Text-based presentation</td>
<td>Liberal use of graphics to define key concepts and requirements</td>
</tr>
</tbody>
</table>

a quick comparison...
Form-based code in practice

Form-based code elements

Consistent with the notion that one size does not fit all, the application of form-based code techniques will also vary from one situation to another. However, they will typically include a regulating plan, requirements and guidelines, and supporting provisions.

Regulating plan

Public involvement and creation of a clear vision provides the foundation for a form-based code. The regulating plan translates this vision into a plan and map of the regulated area designating the locations, which are to embody specific physical characteristics. This plan is often very detailed and considers specific design treatments for small subareas or individual blocks. A regulating plan map will show where different design standards apply, providing the link between the community vision and the form-based code elements that will help implement it.
Development standards are “keyed” into the regulating plan.

Requirements and guidelines
Support for the regulating plan is provided by requirements and guidelines that articulate the details of the planning concepts in the regulating plan. Although the organization will vary somewhat from plan to plan, requirements and guidelines typically fall into the following five categories:
1. Public realm, streetscape and connectivity standards

These standards focus primarily on the design treatment of streets, plazas, and other public areas. The standards are developed in concert with the site and building standards to create a cohesive and mutually supportive set of requirements.

PUBLIC REALM STANDARDS

LEFT: PUBLIC REALM AND STREETSCAPE STANDARDS ARE DEVELOPED IN CONCERT WITH THE SITE AND BUILDING STANDARDS TO CREATE A COHESIVE PUBLIC ENVIRONMENT. MIAMI 21 DRAFT FORM-BASED CODE.

ABOVE: THE RESULT IS A PEDESTRIAN-FRIENDLY, MULTI-MODAL STREETSCAPE.
### Site Design Standards

**2. Site Design and Circulation Standards**

Building placement on the site, pedestrian circulation, surface parking, protection of environmental features, and similar site design issues are addressed by these standards.

**SITE DESIGN STANDARDS**

**Right:** Building siting and building envelope standards help to ensure that the placement and massing of new buildings complement the public realm and are in keeping with the desired form of development for the planning area. Miami 21 Draft Form-Based Code.

**Above:** Site design standards are intended to help create buildings that adequately frame the street and are oriented to pedestrians on the sidewalk.
3. Building form standards
Surrounding buildings, the street system, and the neighborhood context are very important in determining how buildings should be designed to establish an appropriate relationship with their surroundings. Standards relating to building size, form, orientation (especially to the street), entrances, window treatment, and weather protection are designed to create an inviting and functional public realm and a compatible relationship with surrounding development.

4. Land use requirements
Land use regulations are the cornerstone of conventional zoning ordinances, and they are typically incorporated with a form-based code approach. However, their relative importance is reversed in a form-based code, with land use regulations being of secondary importance. Permitted, conditional, and prohibited land uses are controlled in a similar manner as a conventional zoning ordinance, but they are not “micro-managed” with the long lists of permitted uses commonly found in conventional zoning ordinances. As part of a form-based code, land use is typically regulated more broadly, with land use categories in lieu of long lists. A form-based code relies primarily on the other four elements to address how development should behave in the context of the surrounding community.

BUILDING FORM STANDARDS

RIGHT: BUILDING FORM STANDARDS ESTABLISH THE REQUIRED BUILDING DESIGN ELEMENTS NECESSARY TO ENSURE THAT BUILDINGS ARE DESIGNED IN A MANNER THAT ADEQUATELY ADDRESSES AND RESPONDS TO THE PUBLIC REALM.

ABOVE: BUILDING FRONTAGE STANDARDS HELP TO ENSURE THAT BUILDINGS ARE ENGAGING AT THE SIDEWALK LEVEL.
5. Architectural standards
Detailed standards regarding exterior building design features and/or finish materials may be included in a form-based code. They provide complementary requirements to the building form standards.

Supporting provisions
Successful implementation of a form-based code and the five basic elements relies upon two key supporting provisions:

1. Administrative procedures
Similar to conventional zoning and land use regulations, form-based code requirements must be applied to development applications using a clear administrative process.

2. Glossary
Terms associated with a form-based code must be defined and included with the code. Illustrations and diagrams should be included to enhance clarity.
Standards that specify architectural design details, such as the proportion of windows, building materials, body and trim design and colors, and vertical and horizontal division of materials are not mandatory for a form-based code. Getting the neighborhood “bones” right by creating good block and street design; pedestrian-friendly site design; and appropriate building bulk, height, and massing are the most important objectives of form-based codes. In special districts where historic compatibility and design quality are of paramount importance, architectural design standards can be created and administered through a form-based code. These types of architectural design standards can also take the form of design guidelines. In either case, administrative staff with expertise in architectural design or a design commission are necessary for successful implementation.
**Form-based code organization**

In a form-based code, the development standards that dictate urban form are linked to a regulating plan. A regulating plan is similar to a zoning map, but with less emphasis on land uses and more emphasis on the building shape, street type, and neighborhood character in each zone. Development standards define and shape the public realm by providing preset dimensions for every aspect of the site and building.

Form-based codes generally follow one of three basic organizational approaches, which are explained in more detail on the following pages.

<table>
<thead>
<tr>
<th>CODE TYPE</th>
<th>SAMPLE REGULATING PLAN</th>
<th>APPLICATION</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street-Frontage Hybrid</td>
<td><img src="image" alt="Sample Plan" /></td>
<td>A STREET-FRONTAGE HYBRID FORM-BASED CODE ESTABLISHES THE CHARACTER AND DESIGN OF THE VARIOUS STREET TYPES WITHIN A COMMUNITY. BUILDING DESIGN AND FRONTAGE STANDARDS AND STREET TYPES MAY BE MIXED AND MATCHED WHERE NEEDED.</td>
<td>THIS TYPE OF CODE IS MOST APPROPRIATE FOR AN AREA WHERE THERE ARE BOTH EXISTING STREETS AS WELL AS NEW STREETS THAT CAN BE DESIGNED TO RESPOND TO DESIRED BUILDING FRONTAGE TYPES. THIS APPROACH HELPS TO GIVE DEFINITION AND CHARACTER TO STREETS AND BUILDINGS FACING THE STREET.</td>
</tr>
<tr>
<td>Building Type-Based</td>
<td><img src="image" alt="Sample Plan" /></td>
<td>INDIVIDUAL BUILDING TYPES AND THE DESIGN REQUIREMENTS FOR EACH ARE APPLIED TO DIFFERENT BLOCKS OR DISTRICTS WITHIN THE PLANNING AREA.</td>
<td>THIS APPROACH TENDS TO WORK BEST FOR SMALL OR LARGE PLANNING AREAS WHERE THE PRIMARY DESIGN FOCUS IS DIRECTED TOWARD THE COMPATIBILITY OF BUILDING TYPES WITHIN A BLOCK OF NEIGHBORHOOD. THIS TYPE OF CODE IS APPLICABLE TO GREENFIELD OR INFILL, AND CAN BE COMBINED WITH THE STREET-FRONTAGE HYBRID TYPE ABOVE.</td>
</tr>
<tr>
<td>Modified Transect*</td>
<td><img src="image" alt="Sample Plan" /></td>
<td>WHILE THE TRANSECT IS LARGE THEORETICAL IN NATURE, MODIFYING THE TRANSECT TO ADDRESS LOCAL CONDITIONS PRODUCES A CODE THAT IS CONSISTENT WITH THE COMMUNITY’S CHARACTER AND ITS VISION FOR THE FUTURE.</td>
<td>THE MODIFIED TRANSECT APPROACH HAS THE CAPACITY TO ADDRESS UNIQUE COMMUNITY CHARACTER AND CONDITIONS. THIS TYPE OF CODE IS APPLICABLE TO LARGE OR SMALL ZONES, GREENFIELD OR INFILL, AND CAN BE COMBINED WITH THE STREET-FRONTAGE HYBRID TYPE ABOVE.</td>
</tr>
</tbody>
</table>

*FOR MORE INFORMATION ABOUT THE TRANSECT AS APPLIED TO FORM-BASED CODES, SEE PAGES 46-47
1. Street-Frontage Hybrid

**Description.** Development standards are tied to specific frontage/street combinations.

**Application.** In this type of form-based code, specific street types and specific frontage types are developed. Then the code matches the appropriate frontage type(s) to the street type(s). This type of code offers the most flexibility for mixing and matching existing and future street designs with appropriate frontage types.

**Comment.** This type of form-based code can be useful for areas where there are both existing streets and new streets. This type of code is most applicable to corridor zones, where the street and character of the buildings facing that street need definition.
**DEVELOPMENT STANDARDS TABLE**

Development standards are "keyed" into the frontage types shown in the regulating plan. Streetscape standards are established for each street type. Frontage types are also established (though they may not always coincide with the street types), and building design standards are specific to each frontage type.

<table>
<thead>
<tr>
<th>Public Realm/ Streetscape/ Connectivity</th>
<th>Corridor and Corridor Frontage</th>
<th>Main Street and Main Street Frontage</th>
<th>General Neighborhood Street and Frontage</th>
<th>Residential Street and Residential Street Frontage</th>
</tr>
</thead>
<tbody>
<tr>
<td>STREETSCAPE STANDARDS FOR THE CORRIDOR</td>
<td>BLDG SITING STANDARDS FOR LOTS FACING THE CORRIDOR</td>
<td>BLDG FORM STANDARDS FOR LOTS FACING THE CORRIDOR</td>
<td>LAND USE REGULATIONS FOR LOTS FACING THE CORRIDOR</td>
<td>ARCHITECTURAL STANDARDS FOR LOTS FACING THE CORRIDOR</td>
</tr>
</tbody>
</table>

**Street-Frontage Hybrid Regulating Plan**

- Corridor with Frontage
- Main Street with Frontage
- General Neighborhood Street with Frontage
- Residential Street with Frontage
Street-Frontage Hybrid
Form-Based Code Example:
Farmers Branch, TX

the regulating plan: frontage types are coded by street...

Understanding the Regulating Plan

REGULATING PLAN

THE REGULATING PLAN ABOVE ILLUSTRATES WHERE VARIOUS FRONTAGE TYPES ARE PERMITTED WITHIN THE PLANNING AREA. DEVELOPMENT STANDARDS FOR INDIVIDUAL BUILDINGS (SEE NEXT PAGE) ARE “KEYED” INTO THE DIAGRAM. STREETSCAPE DESIGN IS SEPARATED FROM BUILDING FRONTAGE TYPES, AND IS CONTROLLED BY A SEPARATE REGULATING PLAN (SEE FOLLOWING PAGES).
development standards for each frontage type...

**B. Building Envelope Standards: Shopfront Colonnade Sites**

### Height

<table>
<thead>
<tr>
<th>Height</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max</td>
<td></td>
</tr>
<tr>
<td>Min</td>
<td></td>
</tr>
</tbody>
</table>

**Building Height**

1. The height of the principal building is measured in stories.
2. Each principal building shall be at least four (4) stories in height, but no greater than ten (10) stories in height, except as otherwise provided on the regulating plan. Attic story is excluded from minimum and maximum height calculations.

**Parking Elevation Height**

That portion of a parking structure within 40 feet proximity of a principal building (built after 2005) shall not exceed the principal building’s eaves or parapet height.

**Ground Story Height**

1. The ground story finished floor elevation shall be equal to, or greater than, the adjacent exterior sidewalk elevation up to a maximum finished floor elevation of eighteen (18) inches.
2. The ground story shall have at least fifteen (15) feet of clear interior height (floor to ceiling) contiguous to the GRBL frontage for at least one-half (1/2) of its area.
3. The maximum story height for the ground story is twenty-five (25) feet.

**Upper Story Height**

1. The maximum floor-to-floor story height for stories other than the ground is fourteen (14) feet.
2. At least eighty percent (80%) of each upper story shall have an interior clear height (floor to ceiling) of maximum of one hundred twenty (120) feet.

**Buildable Area**

1. Buildings may occupy any portion of the lot behind the RBL (and more) exclusive of any setbacks required by this Code.
2. A contiguous open area equal to at least fifteen percent (15%) of the total buildable area shall be preserved on every lot. Such contiguous open area may be located anywhere behind the parking setback line, either at grade or at the second or third story.
3. No part of any building, except overhanging eaves, awnings, or balconies shall occupy the remaining lot area.
4. Ground Story unit frontage widths shall be a

**Fenestration**

1. Blank lengths of wall exceeding fifteen (15) linear feet are prohibited on all RBL/GRBL.
2. Fenestration on the ground story facades shall comprise at least sixty percent (60%), but not more than ninety percent (90%) of the facade area situated between two (2) and ten (10) feet above the adjacent public sidewalk on which the facade fronts.
3. Fenestration on the upper story facades shall comprise at least thirty percent (30%), but no more than seventy percent (70%), of the facade area per story (measured as a percentage of the facade between floor levels).
4. No window may face or direct views toward a common lot line within thirty feet (30) unless: that view is contained within the lot (e.g. by a privacy fence/garden wall) or, the window sill is at least 6’ above the finished floor level. All common lot lines within the Station Area are subject to the construction of building walls (with no setback) by the adjacent lot owner.

**Building Projections**

1. AWNINGS, BALCONIES, and STOOPS shall not project closer than five (5) feet to a common LOT LINE.
2. No part of any building, except overhanging eaves, BALCONIES, RAY WINDOWS, and AWNINGS, as specified by the Code, shall encroach beyond the RBL.
3. No part of any building, except shopfronts and signs, as otherwise permitted by the Code, shall encroach into the colonnade beyond the GRBL.

**Doors/Entries**

Functioning entry door(s) shall be provided along general story facades at intervals not greater than sixty (60) linear feet.

**Use**

**Ground Story**

The ground story shall house retail uses. See Height specifications above for the specific requirements.

**Upper Stories**

The upper stories shall house residential or commercial uses excluding retail, specialty and retail trade uses (except those that have direct RBL frontage and are second story extensions of the ground story use).
Street-frontage hybrid form-based code example: Farmers Branch

streetscape standards are separate from frontage types and have a different coding system...

This Plan indicates the locations of five street types within the Station Area. The streetscape standards (such as street widths, placement of rear rows, and other amenities or opportunities) associated with the different street types are featured on pages 28-32

The purpose of the streetscape standards is to ensure coherent streets and to assist developers and owners with understanding the relationship between the public spaces and individual buildings.

STREET TYPES REGULATING PLAN

THE REGULATING PLAN ABOVE ILLUSTRATES THE DIFFERENT STREET TYPES WITHIN THE PLANNING AREA AND INDICATES WHERE THE VARIOUS ILLUSTRATIVE STREET SECTIONS (SEE FOLLOWING PAGE) ARE APPLICABLE. NOTE THAT THE STREET TYPES SHOWN HERE AND THE FRONTAGE TYPES SHOWN IN THE PRECEDING REGULATING PLAN DO NOT ALWAYS CORRELATE.
Street-frontage hybrid form-based code example: Farmers Branch

streetscape standards for each street type...

---

**Colonnade Street (Valley View Lane)**

- **Streetspace:** 58 ft
- **Sidewalks:** 11 ft (6 ft street tree area, 4 ft clear, 5 ft dooryard)
- **Travel lanes:** 2 @ 11 ft
- **Dedicated parking lanes:** 7 ft
- **Pedestrian crossing distance:** 26 ft

**Street 58**

- **Streetspace:** 58 ft
- **Sidewalks:** 11 ft
- **Travel lanes:** 4 @ 11 ft
- **Pedestrian crossing distance:** 63 ft

---

WHAT IS A FORM-BASED CODE?
2. Building Type-Based

**Description:** This type of form-based code focuses on specific building types and how they should be arranged relative to surrounding development. This method was first used for larger private development projects and has recently been incorporated into public development requirements. Specific standards are developed for building types deemed appropriate for different locations within the planning area. The regulating plan controls the locations of predefined building types. The development standards define the configurations, features, and functions of buildings.

**Application:** The building types, and the important characteristics of each, are identified and defined. The building types and the design requirements (e.g., setbacks, lot size, architectural features) for each are applied to different blocks or districts within the planning area.

**Comment:** This approach tends to work best for small or large private or public development projects (greenfield development) as well as small planning areas where the primary design focus is directed toward the compatibility of building types within a block of a neighborhood (infill development). This type of code can be combined with the street-frontage hybrid type, if desired.

**Example:** *building type-based regulating plan*
**development standards table**

<table>
<thead>
<tr>
<th>Building Types</th>
<th>Cottage Court</th>
<th>Contextual Rowhouse</th>
<th>Townhouse Cluster</th>
<th>House-Plex</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Realm/ Streetscape/ Connectivity</strong></td>
<td><img src="image1" alt="Cottage Court" /></td>
<td><img src="image2" alt="Contextual Rowhouse" /></td>
<td><img src="image3" alt="Townhouse Cluster" /></td>
<td><img src="image4" alt="House-Plex" /></td>
</tr>
<tr>
<td><strong>Site Design and Circulation</strong></td>
<td>BLDG SITING STANDARDS FOR COTTAGE COURT BUILDING TYPES</td>
<td>BLDG SITING STANDARDS FOR COTTAGE COURT BUILDING TYPES</td>
<td>BLDG SITING STANDARDS FOR COTTAGE COURT BUILDING TYPES</td>
<td>BLDG SITING STANDARDS FOR COTTAGE COURT BUILDING TYPES</td>
</tr>
<tr>
<td><strong>Building Form</strong></td>
<td>BLDG FORM STANDARDS FOR COTTAGE COURT BUILDING TYPES</td>
<td>BLDG FORM STANDARDS FOR COTTAGE COURT BUILDING TYPES</td>
<td>BLDG FORM STANDARDS FOR COTTAGE COURT BUILDING TYPES</td>
<td>BLDG FORM STANDARDS FOR COTTAGE COURT BUILDING TYPES</td>
</tr>
<tr>
<td><strong>Land Use</strong></td>
<td>LAND USE REGULATIONS FOR COTTAGE COURT BUILDING TYPES</td>
<td>LAND USE REGULATIONS FOR COTTAGE COURT BUILDING TYPES</td>
<td>LAND USE REGULATIONS FOR COTTAGE COURT BUILDING TYPES</td>
<td>LAND USE REGULATIONS FOR COTTAGE COURT BUILDING TYPES</td>
</tr>
<tr>
<td><strong>Architecture</strong></td>
<td>ARCHITECTURAL STANDARDS FOR COTTAGE COURT BUILDING TYPES</td>
<td>ARCHITECTURAL STANDARDS FOR COTTAGE COURT BUILDING TYPES</td>
<td>ARCHITECTURAL STANDARDS FOR COTTAGE COURT BUILDING TYPES</td>
<td>ARCHITECTURAL STANDARDS FOR COTTAGE COURT BUILDING TYPES</td>
</tr>
</tbody>
</table>

**BUILDING TYPES**

These multidwelling infill prototypes were developed to address compatibility issues. The table specifies their appropriate location. Multidwelling infill prototypes, Portland, OR.

The regulating plan shows where each building type may occur within the planning area (the plan at right shows where “general neighborhood” building types may be built)... development standards are then established for each building type (at left we see development standards for each of the building types allowed in “general neighborhood”)

---

**WHAT IS A FORM-BASED CODE?**

**SACRAMENTO AREA COUNCIL OF GOVERNMENTS | FORM-BASED CODE HANDBOOK 41**
Building Type-Based Form-Based Code Example

Northwest Crossing
Bend, OR

V.1 Village Mixed-Use

Description: This building prototype is intended to accommodate community commercial, live/work and residential uses in a village setting. Small scale community-serving commercial uses are encouraged at the ground level. The preferred setback from the front lot line is 10 feet. The area within the front setback, known as the dooryard, is treated with a combination of low shrubs, groundcover plants and pavers, and is set off from the sidewalk with a low fence of various materials, such as wrought iron, stone, masonry or wood. Buildings will be mostly two stories fronting the street with a small-scale urban residential character, creating a gracious village ambience and a pedestrian-friendly environment. Street-facing facades will be a combination of tall gable ends, a flat roof behind a parapet, a “false front,” or a roof sloping to the street with prominent gable dormers. Accessory dwelling units are allowed. Non-residential parking is allowed to the sides of buildings, although the preferred location for all parking, residential and non-residential, is at the rear of the lot, off of an alley.

V.2 Village Apartment

Description: This building prototype is intended to accommodate residential multiple-family uses in a village setting, in the form of multiple buildings arranged around a shared landscaped green or courtyard; a building type commonly called a garden apartment. The preferred setback from the front lot line is 10 feet, and buildings may cover up to 60% of the lot. The area within the front setback, known as the dooryard, is treated with a combination of low shrubs, groundcover plants and pavers, and is set off from the sidewalk with a low fence of various materials, such as wrought iron, stone, masonry or wood. Buildings will be mostly two stories fronting the street with a small-scale urban residential character, creating a gracious village ambience and a pedestrian-friendly environment. Street-facing facades will be a combination of tall gable ends, a flat roof behind a parapet, a “false front,” or a roof sloping to the street with prominent gable dormers. Parking is located at the rear of the lot, off of an alley.

V.3 Village Townhome

Description: This building prototype is intended to accommodate residential uses in a townhome building. Buildings are required to be attached, however, no fewer than two, and no more than four townhomes shall be attached without a sideyard or passageway. The preferred setback from the front lot line is 10 feet. The area within the front setback, known as the dooryard, is treated with a combination of low shrubs, groundcover plants and pavers, and is set off from the sidewalk with a low fence of various materials, such as wrought iron, stone, masonry or wood. Buildings will be mostly two stories fronting the street with a small-scale urban residential character, creating a gracious village ambience and a pedestrian-friendly environment. Street-facing facades will be a combination of tall gable ends, a flat roof behind a parapet, a “false front,” or a roof sloping to the street with prominent gable dormers. Parking is located at the rear of the lot, off of an alley.

REGULATING PLAN

The regulating plans above illustrate where different building prototypes are permitted within the planning area. In this plan there is significant overlap where village mixed-use, village apartment, and village townhome prototypes are permitted, resulting in great flexibility for developers.
### Building type-based form-based code: Northwest Crossing

#### DEVELOPMENT STANDARDS TABLE

This table summarizes the various development standards applicable to each building prototype.

<table>
<thead>
<tr>
<th>PROTOTYPE TYPE</th>
<th>DU/ACRE</th>
<th>BUILDING HEIGHT</th>
<th>LOT REQUIREMENTS</th>
<th>SETBACKS</th>
<th>GARAGE REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-1 Town Attached Commercial</td>
<td>varies</td>
<td>20 ft</td>
<td>30 ft CL, 45 ft ME (1)</td>
<td>varies</td>
<td>105 feet</td>
</tr>
<tr>
<td>T-2 Town Detached Commercial</td>
<td>varies</td>
<td>20 ft</td>
<td>30 ft CL, 45 ft ME (1)</td>
<td>varies</td>
<td>105 feet</td>
</tr>
<tr>
<td>T-3 Town Mixed Use</td>
<td>NA</td>
<td>20 ft</td>
<td>30 feet (1)</td>
<td>4C</td>
<td>105 feet</td>
</tr>
<tr>
<td>T-4 Town Apartments</td>
<td>19</td>
<td>20 ft</td>
<td>45 feet (1)</td>
<td>varies</td>
<td>105 feet</td>
</tr>
<tr>
<td>T-5 Town Townhome</td>
<td>12</td>
<td>20 ft</td>
<td>35 feet (1)</td>
<td>24 ft</td>
<td>105 feet</td>
</tr>
<tr>
<td>V-1 Village Mixed Use</td>
<td>NA</td>
<td>NA</td>
<td>30 feet (1)</td>
<td>30-45 feet (1)</td>
<td>24 feet</td>
</tr>
<tr>
<td>V-2 Village Apartments</td>
<td>12</td>
<td>NA</td>
<td>30 feet (1)</td>
<td>30-45 feet (1)</td>
<td>24 feet</td>
</tr>
<tr>
<td>V-3 Village Townhome</td>
<td>NA</td>
<td>NA</td>
<td>30 feet (1)</td>
<td>30-45 feet (1)</td>
<td>24 feet</td>
</tr>
<tr>
<td>V-4 Village Duplex</td>
<td>NA</td>
<td>NA</td>
<td>30 feet (1)</td>
<td>30 feet (1)</td>
<td>77 feet</td>
</tr>
<tr>
<td>V-5 Village Cottage Cluster</td>
<td>NA</td>
<td>NA</td>
<td>30 feet (1)</td>
<td>45 feet (1)</td>
<td>varies</td>
</tr>
<tr>
<td>V-6 Village Industrial</td>
<td>NA</td>
<td>NA</td>
<td>30 feet (1)</td>
<td>45 feet (1)</td>
<td>150 feet</td>
</tr>
</tbody>
</table>

#### All Prototypes. Summary Table

**Introduction**
Building type-based form-based code: Northwest Crossing

where “village townhome” building types are allowed...

- Description: This building prototype is intended to accommodate community commercial, live/work and residential uses in a village setting. Small-scale community-serving commercial uses are encouraged at the ground level. The preferred setback from the front lot line is 10 feet. The area within the setback, known as the dooryard, is treated with a combination of low shrubs, groundcover plants and pavers, and is set off from the sidewalk with a low fence of various materials, such as wrought iron, stone, masonry or wood. Buildings will be mostly 2 stories fronting the street with a small-scale urban residential character, creating a gracious village ambiance and a pedestrian-friendly environment. Street-facing facades will be a combination of tall gable ends, a flat roof behind a parapet, a “false front,” or a roof sloping to the street with prominent gable dormers. Accessory dwelling units are allowed. Non-residential parking is allowed to the sides of buildings, although the preferred location for all parking, residential and non-residential, is at the rear of the lot, off of a lane.

- Use: Residential, live/work townhomes and apartments, and community commercial.

Village Prototypes
Building type-based form-based code: Northwest Crossing

...development standards for “village townhome” building types

- Dwelling units per acre: 12 units per acre maximum.
- Accessory dwelling unit: Allowed.
- Height: 30 foot maximum height for community commercial, 35 feet for live/work townhome, 45 feet for live/work apartment, higher with conditional use permit.
- Lot size: Varies. Minimum lot width for townhomes: 24 feet. Minimum 4,000 square feet for live/ work house and community commercial, 2,500 square feet for townhomes. Generally, blocks are 230 feet deep with a 20 foot wide lane of way.
- Lot Coverage: No maximum for townhomes, live/work townhomes, live/work apartment or multiple family.
- Setbacks: As per City of Bend RH zone for multiple family live/work, RM for townhome live/work, CN for Community Commercial:
  - Rear setback: Minimum: 5 feet. Preferred: 10 feet.
  - Rear garage setback if abutting a lane: 7.5 feet from rear lot line.
- Parking and Garages:
  - General: Parking and garages shall be located off of the lanes or in the interior of the site. Exceptions to allow parking at the side shall be conditional based on review and approval of the NorthWest Crossing Architectural Review Committee.
  - Live/work town home or live/work house: Two spaces for the residential use. Maximum of two additional spaces for each business use.
  - Live Work apartment: City of Bend code for both residential and business use.
  - Community Commercial: Minimum of one of street space for each 500 square feet of floor area. Maximum number of spaces is 5 including handicapped. Minimum of 4 covered bicycle.
- Off-street:
  - Live/work town home or live/work house: Minimum of one residential use. Maximum of two additional spaces for each business use.
- Encroachments: Within the front setback, porches, covered entries, stairs, stoops, bay windows, etc., are encouraged. At the second level of buildings, encroachments in the form of balconies and bay windows are encouraged, but shall not exceed 5 feet or the depth of the setback.
- Landscaping: Village palette.
- Lighting: Village palette.
- Signage: 16 square foot maximum for each live/work house or townhome. Sign must be non-illuminated and attached to the face of the building. Each live/work apartment or community commercial building may have one non-illuminated monument sign and/or one building mounted sign not exceeding a combined maximum area of 32 square feet. Individual businesses in live/work apartment buildings may have additional non-illuminated sign(s) mounted on the building not exceeding a combined maximum of 8 square feet in size.
- Overlay District: Residential Mixed-use and Residential Multi-family.
3. Modified Transect

**Description:** The rural-to-urban transect is a concept originally developed for form-based code application by Duany Plater-Zyberk & Company. It organizes development form into six categories from rural areas featuring natural environments and minimal development to urban core areas with the highest densities and greatest variety of uses. Each of the six transect zones is given a number from T1 — Natural Zone to T6 — Urban Core Zone. The fundamental character elements of each zone, such as building types and setbacks, are described with illustrations and diagrams.

While the transect is a useful tool for analyzing and visualizing development form, communities often do not conform to the basic transect concept with one urban center transitioning out in all directions to natural and rural areas. For example, it is common for communities to have more than one center or uniform urban development along major thoroughfares. The transect concept can still be useful when used as an organizational tool, but it is modified to correlate with the existing or zoned local urban-to-suburban characteristics. The regulating plan articulates a cross section of street types, frontage types, and/or building types along an urban/rural continuum to establish where different uses or building types fit or are inappropriate.

**Application:** The transect concept was not intended to be applied uniformly to all communities. Therefore, modification of the transect approach to address local conditions is very appropriate and, in fact, is usually necessary to produce a form-based code that is consistent with the community's character and its vision for the future.

**Comment:** The majority of form-based code examples are based upon the modified transect approach to better address unique community character and conditions. This type of code is applicable to large or small zones, greenfield or infill, and can be combined with the street-frontage hybrid type.
**the transect**

The transect organizes the built environment into six “zones” or “transects,” according to the intensity of development (regulating plan at left). The transects range from rural to highly urban, and development standards are tailored to each of these unique zones. Image adapted from the Miami 21 Draft Form-Based Code.
Modified Transect-Based Regulating Plan

Applying the concept of the transect to a particular planning area often results in a modified version, which responds to local conditions. The modified transect regulating plan above shows the highest intensity development occurring along corridors, with less intense development tucked within the neighborhood. The figure at left illustrates this concept.
WHAT IS A FORM-BASED CODE?

development standards table

<table>
<thead>
<tr>
<th>Public Realm/ Streetscape/ Connectivity</th>
<th>Urban Thoroughfare Commercial</th>
<th>Neighborhood Commercial</th>
<th>General Neighborhood</th>
<th>Neighborhood Residential</th>
</tr>
</thead>
<tbody>
<tr>
<td>STREETSCAPE STANDARDS FOR URBAN THOROUGHFARE COMMERCIAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Design and Circulation</td>
<td>BLDG SITING STANDARDS FOR URBAN THOROUGHFARE COMMERCIAL LOTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building Form</td>
<td>BLDG FORM STANDARDS FOR URBAN THOROUGHFARE COMMERCIAL LOTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Use</td>
<td>LAND USE REGULATIONS FOR URBAN THOROUGHFARE COMMERCIAL LOTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Architecture</td>
<td>ARCHITECTURAL STANDARDS FOR URBAN THOROUGHFARE COMMERCIAL LOTS</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DEVELOPMENT STANDARDS TABLE

DEVELOPMENT STANDARDS ARE “KEYED” INTO TRANSECT ZONES SHOWN IN THE REGULATING PLAN. THE REGULATING PLAN ABOVE ILLUSTRATES HOW TRANSECT ZONES INCREASE IN BUILDING INTENSITY AS ONE MOVES TOWARD THE COMMERCIAL THOROUGHFARE. THE STREETSCAPE AND DEVELOPMENT STANDARDS ARE INTENDED TO REINFORCE THIS PATTERN.
the regulating plan: the planning area is organized into transect zones...

Modified Transect Form-Based Code Example:

Benicia, CA
Modified transect form-based code: Benicia, CA

Building development standards are established for each transect zone...

**Town Core (TC) Standards**

<table>
<thead>
<tr>
<th>Key</th>
<th>Property Line</th>
<th>Setback Line</th>
<th>Build-to-Line (BTL)</th>
<th>Building Area</th>
</tr>
</thead>
</table>

### Building Placement

<table>
<thead>
<tr>
<th>Build-to-Line (Distance from Property Line)</th>
<th>Front</th>
<th>0'</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Side Street</td>
<td>0'</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Setback (Distance from Property Line)</th>
<th>Front Setback</th>
<th>30'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Side Street Setback</td>
<td>0'</td>
<td>3</td>
</tr>
<tr>
<td>Rear</td>
<td>5'</td>
<td>4</td>
</tr>
<tr>
<td>Adjacent to NG Zone</td>
<td>5'</td>
<td>5</td>
</tr>
<tr>
<td>Adjacent to any other Zone</td>
<td>5'</td>
<td>6</td>
</tr>
</tbody>
</table>

### Building Form

<table>
<thead>
<tr>
<th>Primary Street Façade built to BTL</th>
<th>80% min. *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Side Street Façade built to BTL</td>
<td>30% min. *</td>
</tr>
<tr>
<td>Lot Width</td>
<td>125' max.</td>
</tr>
<tr>
<td>Lot Depth</td>
<td>100' max.</td>
</tr>
</tbody>
</table>

* All heights measured to eaves or base of parapet.

### Notes

- All floors must have a primary ground-floor entrance that faces the primary or side street.
- Loading docks, overhead doors, and other service entries are prohibited on street-facing façades.
- Any building over 50' wide must be broken down to read as a series of buildings no wider than 50' each.

---

**Use**

<table>
<thead>
<tr>
<th>Ground Floor</th>
<th>Service, Retail, or Recreation, Education &amp; Public Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Floor(s)</td>
<td>Residential or Service*</td>
</tr>
</tbody>
</table>

*See Table 4.1 for specific uses.

---

**Height**

| Footprint | 22' * |
| Building Min. | 2.5 stories and 35' * |
| Ancillary Building Max. | 2 stories and 25' * |
| Finish Ground Floor Level | 6' max. above sidewalk |
| First Floor Ceiling Height | 12' min. clear |
| Upper Floor(s) Ceiling Height | 8' min. clear. |

---

**Use**

| Residential uses                          | 1 space/unit; 5 space/studio |
| Other uses                                | 1 space/1,000 sf |

---

**Parking**

**Location (Distance from Property Line)**

| Front Setback | 30' |
| Side Setback  | 0'  |
| Rear Setback  | 5'  |

**Required Spaces**

<table>
<thead>
<tr>
<th>Ground Floor</th>
<th>Uses &lt;3,000 sf</th>
<th>No off-street parking required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses &gt;3,000 sf</td>
<td>1 space/500 sf</td>
<td></td>
</tr>
</tbody>
</table>

**Upper Floors**

- Residential uses
- Other uses

---

**Notes**

- Massard roof forms are not allowed.
- Any section along the BTL not defined by a building must be defined by a 2'6" to 4'6" high fence or stucco or masonry wall.

---

Downtown Mixed Use Master Plan
Opticos Design, Inc.

---

**Encroachments**

<table>
<thead>
<tr>
<th>Location</th>
<th>12' max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Side Street</td>
<td>8' max.</td>
</tr>
<tr>
<td>Rear</td>
<td>4' max.</td>
</tr>
</tbody>
</table>

---

**Notes**

- Canopies, Awnings, and Balconies may encroach over the BTL on the street sides, as shown in the shaded areas. Balconies may encroach into the setback on the rear, as shown in the shaded areas. Upper-story galleries facing the street must not be used to meet primary circulation requirements.

---

**Allowed Frontage Types (see page 4-30)**

<table>
<thead>
<tr>
<th>Gallery</th>
<th>Clearance</th>
<th>1' min. back from curb line</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Height</td>
<td>9' min. clear, 2 stories max.</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>10' max.</td>
</tr>
</tbody>
</table>

---

**Notes**

- Bicycle parking must be provided and in a secure environment.
- Parking drives are highly discouraged along First Street and only permitted if there is no other option for access to parking areas.

---

Downtown Mixed Use Master Plan
Opticos Design, Inc.
Form-based code implementation

Form-based codes need to work in harmony with the existing land use regulatory structure, using one of three general methods for proper implementation.

1. Mandatory requirements

Description: A regulating plan and form-based code requirements are applied to all new development in specified areas on the zoning map. With the form-based code “rules” in place, new development must comply with these requirements.

Application: The form-based code design elements may either be incorporated with other land development regulations as a separate, stand-alone document, or they can be integrated into the body of existing regulations. This method is intended to apply to all development and redevelopment, whether infill or greenfield.

Comment: Whether the regulations are separate or integrated, they must be consistent and mutually supportive. Care must be taken to ensure that conflicting or confusing provisions are resolved. This approach generally requires more effort to prepare and adopt, but because it is integrated into the current code and is mandatory, it has the power to significantly affect new development.

2. Optional – Parallel

Description: This type of form-based code implementation features an optional, parallel code system with unique provisions that are not cross-referenced to other parts of the code.

Application: This type of form-based code implementation is useful in jurisdictions wishing to make form-based regulations available to developers without going through the code amendment process. The form-based code is available as an option in designated zones. Similar to the floating zone method, the form-based code provisions are prepared in advance of being applied to a specific property or area.

Comment: Even though the code is usually not cross-referenced with other sections of the code—for instance, it may contain unique landscaping or parking provisions—care must be taken to avoid legal conflicts with the current code. This implementation method requires the least effort to prepare and adopt.

FBC implementation options

FBC IMPLEMENTATION OPTIONS FORM-BASED CODES MAY BE MANDATORY, OPTIONAL, OR MAY BE CREATED AS “FLOATING” ZONES.
3. Floating zone

**Description:** The form-based code provisions and zoning district are developed in a similar manner to the mandatory method, but they are not applied to specific areas on the zoning map. The form-based code zoning district “floats,” because it is not applied to a specific property until requested by a developer. Often the request is triggered by an application to rezone a property.

**Application:** A developer wishing to use the form-based code approach would create a regulating plan to identify how the adopted form-based code provisions would be applied to the property. This application would then go through the development review process to be approved. If a developer elects to use the form-based code provisions during the review process, the form-based code requirements become mandatory.

**Comment:** This implementation method may be a more feasible middle ground for many jurisdictions that do not wish to undertake the significant preparation and adoption effort required for a mandatory, integrated code.

### What is a hybrid FBC?

A hybrid code is one that incorporates an FBC approach toward form, but uses provisions, processes, and standards from the current code. A hybrid code is usually integrated into the pre-existing code, rather than replacing it. A hybrid code can take the form of a chapter within the code, similar to a special district or overlay. The hybrid FBC is cross-referenced to other sections of the pre-existing code for selected development standards, such as parking dimensions or landscaping standards.
Creating and administering a form-based code

Planning directors in the Sacramento region have at least one thing in common: many challenges and limited resources. In that context, the prospect of creating and administering a new type of code may seem to be an overwhelming challenge. Based upon the experience of other communities across the United States, the remainder of this section and the case studies in Section 3 will provide many practical tips to make the job easier. Three key elements for successful creation and administration of an FBC are:

1. Involving stakeholders in the development of a new code. An FBC is a new concept in most communities, so it is important to reach out to key stakeholders and educate them about form-based codes and the implications for the community. Key stakeholders include property owners, business owners, developers, and neighborhood groups. These groups will care about the substance of the proposed regulations as well as the administration of the new code. The interaction with these groups will produce a stronger code and help build support for the staff recommendations presented to the planning commission and city council.

2. Developing a strategy for administering the FBC. A new FBC address not only the substantive rules for new development but also the process for applying the new rules. The process choices are described later in Section 2. Even while the FBC is being written, it is a good idea to also develop a strategy for administering the new code. The strategy should address staff training, staff qualifications, customer education, and costs for administration. Policy makers will want to know this information, and administrators will want to budget for and be ready to administer the new FBC upon its adoption.

A form-based code is different from conventional codes, so the staff responsible for code administration is likely to need training on how FBCs work generally and how the specific local FBC will be administered. At times it may be necessary to hire consultants or additional staff with specific architectural or urban design credentials. However, it is essential for staff to thoroughly understand the design principles behind the FBC, the specific FBC requirements, and the method for evaluating development applications for compliance with the code. One technique for building staff capacity is to hire an FBC-experienced professional to advise the city or county on administrative issues and to conduct training for agency staff. Another approach is to send staff to an FBC training course and then have the expert staff provide guidance to other agency personnel. A popular training program is provided by the non-profit Form-Based Codes Institute (FBCI). The three-course curriculum is taught by nationally prominent form-based coding practitioners and professionals in the fields of planning, architecture and urban design, and land use law. Currently scheduled courses are listed at http://www.formbasedcodes.org/. AIA CES and APA AICP credits are available for these courses.

The budget impacts of a new FBC are difficult to generalize. Factors to consider include the complexity of the jurisdiction’s existing code, the review process adopted for the new FBC, and the capacity of staff for administering the new code. There will be costs associated with the creation or amendment of a plan and/or zoning code whether an FBC or a conventional zoning code approach is used. A clear plan policy direction, which has broad community support, is necessary to maximize the effectiveness of conventional zoning or the FBC approach. Administrative costs should not be significantly different for an FBC when there is proper development of the FBC, staff training, and public/development community education. The cost could be marginally greater if a consulting architect is used to help the city staff evaluate development applications. Although the initial costs might be higher than a conventional code, the intent is that an FBC will result in physical development that better reflects what the community desires, therefore saving in time and other resources later.
3. **Educating the customer.** One important way to increase the efficiency of administering an FBC is to educate code users, including property owners, developers, architects, homeowners, and business owners, about the regulatory components and how it is administered. Before the effective date of a new FBC and continuing sometime afterwards, the jurisdiction should host question and answer sessions on the new code for its permit customers. Jurisdictions should also develop written materials and web site information to help customers understand the requirements for development under the FBC.
Developing a form-based code
Step 1: What is the project scope and organization?

The important steps to creating a form-based code are:

1. What is the project scope and organization?
2. What do we have?
3. What do we want?
4. What do we need?
5. How do we get there?

Although the specific activities in creating a form-based code may vary, this process should involve answering five questions: What is the project scope and organization, what do we have, what do we want, what do we need, and how do we get there?

Before the planning project gets underway, preliminary scoping and organization are essential for successful and timely completion of the project. This first step should include generally defining the planning area and the desired outcome. The preferred results will vary depending upon any number of factors. The form-based code could be a tool to help preserve existing neighborhood character, to encourage enhancement of an area, to facilitate the evolution of an area to develop a different character over time, or to help transform an area into a different place over a short period.

General planning and outcome

Because a form-based code applies to individual properties in the same way as conventional zoning districts and regulations, a form-based code must be tied to a specific planning area or district. Although the exact boundaries of the planning area may change as the project moves forward, a preliminary planning area should be established.

Organizational and regulatory approach

The form-based code organization (transect, street-based, etc.) and regulatory approach (mandatory, optional, etc.) should be considered. The professional team of local planning staff and/or consultants should be determined, along with a project schedule, to complete the remaining four steps.

TIP

Form-based codes may certainly apply to an entire city. However, this broad application would represent an ambitious undertaking because of the detailed planning involved. Beginning with a form-based code program on a district level is often the most manageable way for a city to initiate a form-based code program.
Step 2: What do we have?

Analysis of existing conditions

A clear understanding of the current development characteristics of the community is essential to best understand how to move forward. This analysis should focus on the special community attributes regarding:

► Public Realm and Street Character and the degree to which they create safe and inviting pedestrian environments and public spaces.

► Site Design and Circulation and the extent to which they generally promote compatibility and easy access between nearby properties.

► Building Form and how it creates inviting and functional public spaces and compatible relationships with surrounding development.

► Land Uses and how they promote or inhibit a pedestrian-oriented environment with a proper integration of uses.

► Architectural Detailing and the degree to which it complements community character and sense of place (optional).

TIP

This analysis should first focus on the primary character-defining aspects of the planning area and the corresponding elements included in the plan and regulatory documents, base maps, and the basic neighborhood character and circulation. Next, the details of existing development should be understood by evaluating typical building forms, locations on building sites, building setbacks, building features (e.g., ground floor commercial space, balconies), driveways, parking, and streetscapes. These community attributes should be reviewed to provide sufficient understanding about current development character.

TIP

A professional market assessment of the current and future market potential can often be a useful element of the existing conditions analysis. While a community vision and plan may influence future market demand for commercial, office, employment, and residential development, it must be tempered with realistic market expectations. This understanding of market forces creates a greater opportunity for successful implementation.
ANALYSIS OF EXISTING CONDITIONS

An analysis of a community’s existing development characteristics is a crucial first step in establishing a vision for how the community would like to develop. The existing conditions analysis should include items such as current circulation patterns (left) and right-of-way design and character (next page).
analysis of existing conditions...street design

Santa Ana Renaissance Specific Plan
Santa Ana, California

Existing Street Sections

Moule & Polyzoides
Architects and Urbanists
May 2006
analysis of existing conditions...land use and architecture

ANALYSIS OF EXISTING CONDITIONS

AN EXISTING CONDITIONS ANALYSIS SHOULD INCLUDE ITEMS SUCH AS LAND USE PATTERNS (FAR LEFT), TYPICAL BUILDING FORM AND SITE DESIGN, AND LOCAL ARCHITECTURAL PRACTICES (NEAR LEFT).
Plan and code audit

Blueprint growth principles

In addition to describing and recognizing the key physical characteristics of the planning area, it is equally important to understand how the current plan policies and ordinance requirements support the Blueprint Growth Principles. The seven principles can be translated to specific features or characteristics that should be found in SACOG communities. These important characteristics, organized according to the five form-based code components, are:

► Public Realm and Streetscape.
► Site Design and Circulation.
► Building Form.
► Land Use.
► Architecture.

Public realm and streetscape...

► Streetscape amenities including landscaping and street trees
► Fine-grained street grid providing easy access for all modes
► Frequent opportunities to cross streets
► Easy access to open space areas/plazas
► Minimize impervious surfaces devoted to roadways and surface parking
► Utilize “Green Street” techniques to reduce the amount and enhance the quality of storm water runoff

► Sidewalks providing a pleasant, comfortable, and safe pedestrian environment
► Buildings face the street and define the public realm
► Building frontages and entries oriented to the street
► Active ground floor uses along major street frontages and key intersections
► Building features that provide shade and weather protection for pedestrians
► Public buildings and open spaces serving as focal points
site design and circulation...

- Pedestrian connections between buildings, transit, and surrounding areas
- Secure and convenient bike parking
- Shared parking for complementary mixed uses to use land more efficiently
- Projects designed to allow increased density over time
- Protection and enhancement of important natural site features
- Buildings oriented to take advantage of solar energy

- Minimize on-site parking requirements
- Shared parking for complementary mixed uses to use land more efficiently
- Projects designed to allow increased density over time
- Reduced impervious surfaces devoted to parking
- Use of storm water management and treatment techniques in the design of on-site landscaping

- Direct pedestrian access to building entrances from the street
- Surface parking located to the rear or side of buildings
- Building frontages located next to the street in commercial and mixed-use areas
- Buildings oriented to take advantage of solar energy
building form

- Building scale and setbacks that provide comfortable pedestrian-scale streetscapes
- Ground floor spaces in mixed-use areas designed to support active commercial uses
- Taller buildings in appropriate areas to enable greater land utilization and reduce urban expansion pressures

- Ground floor spaces in mixed-use areas designed to support active commercial uses
- Structured parking in higher density areas

- Building design that promotes attractive and safe walking areas and “eyes on the street”
- Building scale and setback transitions between different uses/building types
land use...

- Vertical and horizontal mixed-use on one site
- Different land uses and destinations within walking distance to each other and to transit
- Increase density maximums and require minimum densities
- Highest densities and mix of uses near transit
- Provide a range of housing types in mixed-use projects
- Affordable housing types near transit

- Active ground floor uses in commercial and mixed-use areas
- Redevelopment of areas that are appropriate for higher density and/or mixed use
- Encourage redevelopment of appropriate sites rather than expand the urban area
architecture...

- Buildings designed with quality materials and inviting facades
- Design infill development that is compatible with the character or historic value of adjoining sites
- Design buildings to reduce energy demand

- Building features that provide shade and weather protection for pedestrians
- Retain local architectural styles and character
- Architectural details that ensure compatibility

- Buildings incorporate architectural features that convey a sense of place
- Interesting building features and windows facing the street
Audit checklist

Using a checklist, the current plan policies and zoning regulations should be evaluated systematically for the degree to which they would enable implementation of a form-based code, which would promote the desirable community characteristics noted in the checklist. This analysis should also consider the seven Blueprint Growth Principles. The current code deficiencies should be identified and summarized.

**TIP**

Remember to include plan policy or regulatory elements that do not apply to the study area, but may provide information or ideas, and that may have transferability to the form-based code.
Step 3: What do we want?

Community outreach and involvement
Because a form-based code is more proactive and context-based than conventional zoning, the community—residents, business owners, developers, and agencies—must be involved from the beginning. The importance of active public participation cannot be overstated. For any plan to succeed, and for a form-based code to help a community attain its goals, there must be general community consensus about where the community is today and what it wants in the future. As noted previously, one of the shortcomings of conventional zoning is that it is often generically applied without a detailed planning process to identify what the zoning regulations should achieve.

Create a vision and illustrative plan
The specific methods to reach a common community vision will vary, but the key ingredient is active participation and discussion using community workshops, design charrettes, and focus interviews with key stakeholders. The visioning process should include specifically defining the planning area. With the community actively engaged, a vision and illustrative plan for a defined area are created. Not only should the vision satisfy community objectives, it also should support the Preferred Blueprint Scenario Growth Principles. The illustrative plan will show how individual properties in the planning area will be affected by the form-based code. This exercise may also conclude with an action plan, which identifies specific activities for completing steps 4 and 5.

TIP
Community understanding and support is absolutely essential to the success of a form-based code or any other community plan, for that matter. A charrette has proved to be an ideal method for bringing the technical skills, stakeholders, and citizens together for an intensive, multi-day planning process. A charrette is a carefully choreographed event that brings all of the stakeholders, technical staff, and their collective energy together to develop a vision and implementation plan. The most important benefits are (1) shortened visioning and code development process, and (2) a collaborative public process that effectively builds public understanding and support for the vision and form-based code implementation method.
Step 4: What do we need?

Regulating plan

With the guidance provided by a vision and illustrative plan, specific implementation elements must be developed to support them. A regulating plan normally addresses the following elements of the community vision:

- Public Realm and Streetscape.
- Site Design and Circulation.
- Building Form.
- Land Use.
- Architecture.

Land use regulations are the cornerstone of conventional zoning, and they are normally incorporated as part of a form-based code for their value in identifying the desired locations for different types of land use activities, such as mixed-use districts, residential neighborhoods, and employment zones. Land use regulations are also employed to implement general plan goals, such as ensuring minimum residential densities and a range of housing types. Although land use is important, it is generally a secondary element when used with a form-based code.

The regulating plan emphasis given to the other four design elements will vary based on the specific circumstances. For example, the primary concern for a historic downtown district might be building form and architecture, while a strip commercial corridor might call for a focus on site design and streetscape issues. The regulating plan will include a plan map indicating the location of different development types (e.g., Main Street Frontage, Village Townhome), which are organized and defined according to the basic approaches summarized in Section 1. The case studies in Section 3 illustrate how finding the right balance might work in practice.

Integrate form-based code and conventional zoning

The audit (Step 2) will provide a clear understanding of the current policies and regulations that apply to the planning area as well as an understanding of the provisions, which may need amendment to be consistent with the form-based code. It will underscore the strengths and weaknesses of the existing plans and ordinances. Because of the importance of creating a high-quality public realm, the street design standards must be an integral part of this review and evaluation. The community can determine which provisions will need modification to allow implementation of the vision, regulating plan, and form-based code elements.
Standards and guidelines

Standards should generally be used for development and design elements that are (1) essential for successful plan implementation and/or (2) relatively easy to apply, with clear and objective language. Street design standards, which determine the specific street and sidewalk widths, and building setback requirements would be two examples of essential elements that are defined by clear and objective standards.

Guidelines should generally be used for development and design elements that are (1) desirable but not essential for successful plan implementation and/or (2) more subjective in nature and difficult to distill into quantifiable standards. Examples would be guidelines pertaining to architectural details covering signs and building frontage features, such as porches, arcades, and window or roof treatments.

With standards setting the “floor” with minimum requirements, incentives can be an excellent method for encouraging developers to go beyond the minimum and create projects that are more supportive of local and regional planning objectives. A two-track review process may be used to encourage compliance with local and regional planning goals by allowing abbreviated and less complicated application review procedures for proposals that meet minimum design, density, or land use thresholds. Density bonuses, reduced parking requirements, and reduced application fees are examples of other incentives.

As noted in Section 1, standards and guidelines may be applied in three basic ways:

1. Mandatory requirements that are applied to all new development within the planning area for the form-based code.
2. Floating zone requirements that are applied to specific developments or areas at the request of the developer. Once adopted, they are mandatory as in the first implementation method.
3. Optional requirements are prepared in advance and offered as an alternative of development evaluation criteria to standard zoning. Developers have the opportunity to choose which set of requirements to follow.

### Quantitative Standards

#### Table 130-3

<table>
<thead>
<tr>
<th>Standard</th>
<th>CN1</th>
<th>CN2</th>
<th>CO1</th>
<th>CO2</th>
<th>CM</th>
<th>CS</th>
<th>CG</th>
<th>CX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. FAR (see 33.130.205)</td>
<td>70 to 1</td>
<td>75 to 1</td>
<td>75 to 1</td>
<td>75 to 1</td>
<td>2 to 1</td>
<td>2 to 1</td>
<td>2 to 1</td>
<td>3 to 1</td>
</tr>
<tr>
<td>Maximum Height (see 33.130.210)</td>
<td>30 ft.</td>
<td>30 ft.</td>
<td>30 ft.</td>
<td>45 ft.</td>
<td>45 ft.</td>
<td>45 ft.</td>
<td>45 ft.</td>
<td>75 ft.</td>
</tr>
<tr>
<td>Min. Building Sticks (see 33.130.215)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Street Lot Line Garage Entrance Setback (see 33.130.250)</td>
<td>5/18 ft.</td>
<td>5/18 ft.</td>
<td>5/18 ft.</td>
<td>5/18 ft.</td>
<td>5/18 ft.</td>
<td>5/18 ft.</td>
<td>5/18 ft.</td>
<td>5/18 ft.</td>
</tr>
<tr>
<td>Lot Line Abutting an OS, RX, C., or I Zone Lot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Max. Building Sticks (see 33.130.215)</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>10 ft.</td>
<td>5 ft.</td>
<td>5 ft.</td>
<td>5 ft.</td>
</tr>
<tr>
<td>Street Lot Line Transit Street or Pedestrian District</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>10 ft.</td>
<td>5 ft.</td>
<td>5 ft.</td>
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</tr>
<tr>
<td>Building Coverage (see 33.130.220)</td>
<td>Max. of 65% of site area</td>
<td>Max. of 65% of site area</td>
<td>Max. of 65% of site area</td>
<td>Max. of 65% of site area</td>
<td>Min. of 50% of site area</td>
<td>Min. of 50% of site area</td>
<td>Min. of 50% of site area</td>
<td>No Limit</td>
</tr>
<tr>
<td>Min. Landscaped Area (see 33.130.225)</td>
<td>15% of site area</td>
<td>15% of site area</td>
<td>15% of site area</td>
<td>15% of site area</td>
<td>15% of site area</td>
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<td>15% of site area</td>
</tr>
<tr>
<td>Landscaping Abutting an R Zoned Lot (see 33.130.225)</td>
<td>5 ft. @ L3</td>
<td>5 ft. @ L3</td>
<td>5 ft. @ L3</td>
<td>5 ft. @ L3</td>
<td>5 ft. @ L3</td>
<td>5 ft. @ L3</td>
<td>5 ft. @ L3</td>
<td>5 ft. @ L3</td>
</tr>
<tr>
<td>Ground Floor Window Stids. Apply (see 33.130.230)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Pedestrian Requirements (see 33.130.240)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Required Parking [8]</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Required</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Required</td>
</tr>
</tbody>
</table>

#### Quantitative Development Standards

While design and development standards are quantitative, design guidelines are qualitative and aspirational in nature. The development standards table above provides clear and objective development requirements, while the design guidelines on the next page are subjective.
BACKGROUND

Many of Portland’s buildings follow the tripartite architectural division of base (sidewalk-level), middle, and top. Expressing the sidewalk-level of buildings differently than the upper levels of the building is representative of the evolution of building design and the separation of building uses. This demarcation acknowledges the often varying uses in a building and reinforces the human-scale emphasis of the Central City’s built environment.

Different building materials and facade elements, such as masonry belt-courses, large window openings, awnings, signs, and canopies are used to differentiate the sidewalk level of the building from the other building sections. These elements develop human scale on the street-wall and create a rhythm when coordinated with similar elements on adjacent buildings. Building facades that step back above the base of the building create visual stopping points along the vertical plane, and are most effective where the height of the typical street-wall is exceeded by the building’s total height.

GUIDELINE

Differentiate the sidewalk-level of the building from the middle and top by using elements including, but not limited to, different exterior materials, awnings, signs, and large windows.

This guideline may be accomplished by:

1. Using building elements to create scale.
   The Rock Bottom Brewery, in the ground level of the Centennial Block at SW Morrison and 2nd Avenue, has integrated awning, sign, and lighting systems, in addition to large windows at the sidewalk-level of the building, to create a human scale for pedestrians on the adjacent sidewalk.
Step 5: How do we get there?

Proper integration with the existing code

Typically, a form-based code will be part of an overall set of community regulations for public and private improvements. To integrate the form-based code with other provisions, the following should be considered:

▸ Matching the specific area for the form-based code with other planning areas, specific plans, and zoning to avoid conflicting requirements and poor transitions between properties within and outside of the areas subject to the form-based code.

▸ Selecting a review process that is consistent with procedures normally followed for areas outside of the form-based code regulating plan area.

▸ Removing conflicting provisions in the existing code. The code audit will identify the provisions that need to be revised or deleted to avoid confusion or conflict between the form-based code and other requirements.

▸ Resolving any conflicting or inconsistent use of terminology and establishing common definitions is.

Make it readable

The format of land use and development regulations is commonly difficult to read, with few illustrations to facilitate understanding by the reader. Because a form-based code is intended to be much more user-friendly than typical zoning codes, it should adhere to the following guidelines:

▸ Use simple text that is brief and to the point.

▸ Be careful to use terms consistently throughout the form-based code and other relevant ordinances.

▸ Avoid the use of jargon or acronyms.

▸ Make liberal use of diagrams and illustrations to support the text and make concepts and standards clear to the reader.

▸ Use an uncluttered format, which integrates text and graphic elements to facilitate easy comprehension by the reader. Typical codified zoning ordinance formats, with crowded text and few graphics, should not be used.
Road test

Once the draft code provisions are completed, they should be tested using past and/or anticipated development applications to determine how well the draft addresses real world development and design issues. The jurisdiction staff should apply the new form-based code and other zoning ordinance procedures and requirements to determine whether the draft code would enable successful plan implementation without being unnecessarily burdensome to the applicant. All staff responsible for development review and approval should be involved in this evaluation, including but not limited to, planning, public works, emergency services, and building officials.

This test should include multiple development types and circumstances that would be representative of actual development proposals. The staff should pay particular attention to the following questions:

- Does the code yield development outcomes that are consistent with the community vision?
- Are there any city ordinance requirements or standards that are inconsistent or that conflict?
- Do the application submittal requirements provide sufficient information and detail to evaluate the application according to the form-based code and other ordinance criteria?
- Are the form-based code and other ordinance standards clear, objective, and easily interpreted, yielding predictable results that support the vision?

Following this review, the draft form-based code and/or any other ordinance provisions should be amended as necessary to respond to issues identified during the test.

Monitoring performance

After the code provisions have been adopted, their performance should be monitored by jurisdiction staff. The questions used during the initial road test should continue to be asked as development application reviews are completed. Problem areas should be recorded, and an annual update amendment process is recommended.
Technical FAQ

**What is the relationship of a form-based code to other plans (e.g., Specific Plans, General Plans)?**

Similar to a conventional zoning code, an FBC is an implementation tool, which must be consistent with the relevant plans for the area regulated by an FBC. An FBC plays the same role as a conventional zoning code. The difference is the shift in the primary focus from controlling land use to regulating urban form and design. The heavy emphasis on illustrating desired development and design outcomes in a form-based code approach may be used to refine and clarify the policy direction of a general or specific plan.

The General Plan is the adopted regulating plan that provides overall policies, goals, and guidance for how a jurisdiction is going to manage its growth. A Specific Plan covers a portion of land within the General Plan boundaries and provides much more specific regulation. A form-based code is a plan implementation tool that essentially fills the same role as a conventional zoning ordinance. It is subservient to the General Plan and any relevant specific plan. The specific requirements of an FBC must be consistent with those plans.

A development agreement is the final “contract” between a developer and the local governing agency. It determines what the developer is required to provide as a condition to implementing the entitled development plan. If a form-based code is part of the development agreement, the developer is thereby required to follow the form-based code.

Because the goal of many form-based codes is to encourage mixed-use development, an existing mixed-use ordinance can be superseded by a form-based code.

**How can a local government achieve desired percentages for each land use (e.g., retail, residential) with form-based codes?**

A form-based code may identify land uses on specific parcels just as a conventional zoning code does. Form-based codes and conventional zoning codes both have two basic ingredients – land use regulations and design requirements. The primary difference is that an FBC emphasizes the design and urban form aspects of development and a conventional zoning code pays the most attention to land use. Desired land use outcomes, such as commercial centers, employment areas, residential neighborhoods, and minimum densities, are all typically included as part of an FBC or in a companion ordinance. Conventional zoning codes are usually more specific about the types of land uses allowed, but individual zoning districts typically allow a range of land uses (e.g., light manufacturing, warehousing, and office uses in a light industrial zone or a variety of housing types in one residential district). Either approach offers a similar degree of flexibility for the market to determine the resulting land use. Therefore, the desired allocations of different land uses may be guided and achieved in a similar manner using an FBC approach or conventional zoning.

**Under a form-based code, which does not provide detailed use guidance, how should a jurisdiction plan future infrastructure needs?**

Similar to a conventional zoning ordinance, an FBC is one of the implementation tools used to implement community plan policy direction. There is no standard approach that must be followed, and an FBC can be tailored to meet community needs, including provision of the necessary infrastructure and services. The infrastructure issue is perhaps the most significant for greenfield sites, where it is important to appropriately anticipate future infrastructure demands. This can be done using an FBC by considering the following:

- An FBC still regulates land uses, although its emphasis is on design and physical form. For example, an FBC focuses on basic land use categories and does not distinguish between similar uses (e.g., barber shop and a pet store). The community could specify land use based on potential infrastructure demand (e.g., water, sewer, streets). If areas are planned for a mix of uses, the FBC could...
include required minimums for the types of uses actually developed.

- Instead of regulating the combination of land uses in a mixed-use area, the community could adopt a performance-based approach that allows a mix of uses as long as predetermined utility demand thresholds (e.g., traffic generation, water consumption, electricity demand) are met.

- Development standards that affect storm water facilities, such as maximum impervious surface area, can be included in either a conventional code or an FBC.

- Coordination with infrastructure ordinances needs to be part of the planning process. The FBC approach, with the development of a community vision and plan, offers an early opportunity to address infrastructure issues as part of the planning process.

- Conventional zoning usually allows a range of uses, allowing the developer and the market to determine the character of a new project. The range of uses found in most conventional zoning districts can have very different utility demands. Infrastructure planning must also have a corresponding level of flexibility to at least respond to minor changes in development over time.

**How does the California Housing Element law factor into form-based codes?**

The Housing Element law basically provides each city and county in the state with an allocation of housing units. The jurisdiction must then zone enough units of housing to meet this number within a 7.5-year period. Within the total allocation, a jurisdiction must also zone enough high density units for low-income and very low-income residents. The form-based codes approach generally is more concerned with physical form than with land use, which is the main focus of conventional zoning. However, to meet Housing Element requirements, form-based codes may include minimum and/or maximum housing unit requirements as well.

In addition, California law explicitly allows for bonus densities (Government Code 65915 et seq.), zoning for emergency shelters (Gov. Code 96683), and second-unit provisions (Gov. Code 65852.2(g)). In each case, form-based codes could be specifically designed for these uses, and/or they could be specifically identified as a targeted land use, just as in conventional codes.

Although it is focused on urban form and design, an FBC is fully intended to promote local planning goals and to meet community needs. Affordable housing requirements can be incorporated, just as they are with conventional zoning. It is important to involve affordable housing stakeholders in the FBC creation process in order to include a range of housing types that are consistent with local affordable housing needs. This involvement could go a step further, and the FBC could require minimum residential standards for the number or type of units in specific areas. Because the FBC approach helps resolve compatibility issues associated with higher density and mixed-use housing, it has the potential to provide improved opportunities for achieving affordable housing goals by making a wider range of housing types available in a manner that is acceptable to the community.

**If a local jurisdiction adopts a form-based code, does it need to perform an environmental review? And if so, what level of review?**

Yes, environmental review should be considered. In California, the adoption of a land-use regulation, including a form-based code, is subject to environmental review under the California Environmental Quality Act (CEQA). The appropriate level depends on what the potential impacts are, and what prior environmental reviews have been conducted. For instance, if the adopted form-based code is consistent with an environmental review already completed for a General Plan or Specific Plan that covers the subject area, then further review is probably not necessary.

On the other hand, if the form-based codes are anticipated to lead to an increase in density or intensity, and there is no existing environmental review for the subject area, then an initial study should be prepared for the FBC. If the impacts are relatively minor or can be mitigated, then a Negative Declaration or Mitigated Negative Declaration can be
prepared. If the impacts are greater, then an Environmental Impact Report (EIR) may be warranted.

**Under an FBC, how can minimum parking requirements that are tied to uses be achieved?**

Parking is regulated by an FBC in the same manner as it is by a conventional zoning ordinance. Minimum parking standards are established according to different land use types – as they are with conventional zoning. The primary difference in the approach to parking is the promotion of surface parking to the rear or side of buildings rather than between the building and the street. Because form-based codes tend to promote more walkable, high-density mixed-use development coupled with on-street parking and transit, the parking standards are often lower than those associated with conventional zoning.

**What are the potential costs associated with developing and administering a form-based code?**

Developing a plan and related implementing ordinances will incur costs regardless of the approach taken. Because of the wide variety of planning projects ranging from general plans to specific plans for discrete areas, the costs for developing an FBC or a conventional zoning code cannot be generalized. However, in the context of using a thorough public involvement process to develop a community vision, plan policy direction, and create integrated implementation tools, the costs associated with an FBC or conventional zoning code should be similar.

Administrative costs may also vary based upon the complexity of the jurisdiction’s existing code, the review process adopted for the new FBC, and the capacity of staff for administering the new code. A clear plan policy direction, which has broad community support, is necessary to maximize the effectiveness of conventional zoning or the FBC.

The key functions in developing an FBC that a planner can perform include:

- Managing the development of the vision, objectives, and goals of the planning area;
- Managing the potential solutions, and the process to identify the preferred steps;
- Developing public review materials and managing the public involvement process;
- Developing the standards for street design and physical relationship of building to the street; and
- Managing the team of technical support (engineers, architects, etc.).

Some of the likely areas where planners may need technical assistance include:

- Developing any architectural design components or elements for the FBC;
- Creating drawings and other illustrations that have an architectural component; and
- Performing any of the FBC elements related to engineering analysis, such as street design.
Case studies
Introduction to the case studies

The purpose of the case studies is to illustrate how the form-based code development process described in Section 2 could be applied in different situations. It must be emphasized that while these are real places, they are hypothetical examples only to show how the form-based code process might be applied – not to provide a plan and ordinance for the city to implement.

The case studies were selected because they are representative of the types of areas where much of the region’s future growth will be accommodated. These case study examples are intended to illustrate the ways in which a form-based code could be applied to support the Blueprint Growth Principles. They include:

- Urban Infill – Alkali Flat in Sacramento
- Suburban Infill – Auburn Boulevard in Citrus Heights
- Small City Downtown Redevelopment – Old Town and Downtown in Auburn
- Greenfield Development – Creekview in Roseville

To make the case study exercises as helpful and relevant as possible, community workshops were held in December 2007 in each of the four cities. Case study areas, important community issues, and the potential focus for a form-based code were discussed. The results of the workshops are reflected in the case studies.
The case studies...

Urban Infill
Sacramento Alkali Flat

Suburban Infill
Citrus Heights

Small Downtown Infill
Auburn

Greenfield Development
Roseville
Urban infill: Alkali Flat

the site: an established urban neighborhood

Characteristics

Alkali Flat originally developed in the 1850s as a wealthy residential neighborhood. But over time, the neighborhood changed, the condition of much of the housing declined, and many properties redeveloped to create the current mix of single- and multiple-family residences, offices, retail, and industrial uses. A significant number of designated historic residences remain throughout Alkali Flat. However, the building scale, architecture, and site design of past redevelopment has sometimes been inconsistent with the historic character of the neighborhood.

the issues...

common urban infill issues to be addressed with form-based code include:

► Ensuring that new infill is of high quality and complements the historic and architectural character of the existing neighborhood
► Ensuring that the massing and scale of new buildings is consistent with and complementary to the scale of existing buildings
► Ensuring that new uses are compatible with existing residential uses (especially in terms of performance standards)
► Encouraging higher intensity uses (office and commercial) and use conversions to occur along corridors when possible
As in many older neighborhoods, Alkali Flat residents share an interest in allowing redevelopment that invigorates this mixed-use area, while complementing its existing historic character. In addition, significant redevelopment is occurring in the neighboring downtown area to the south, and the rail yards to the north are now being prepared for new urban infill development. The challenge today is how to allow redevelopment within Alkali Flat and its immediate surroundings in a way that retains the neighborhood’s historic flavor.
RESIDENTIAL AND COMMERCIAL SETBACKS

THE PHOTO AT LEFT ILLUSTRATES HOW DEEPER FRONT SETBACKS ARE TYPICAL OF RESIDENTIAL USES, WHILE THE PHOTO AT RIGHT ILLUSTRATES HOW ZERO-LOT-LINE SETBACKS ARE APPROPRIATE FOR COMMERCIAL USES. ZERO-LOT-LINE BUILDINGS AND COMMERCIAL USES SHOULD OCCUR ALONG HIGHER TRAFFIC CORRIDORS.
### Recommendation Summary

#### Most Important for Alkali Flat

**Site Design and Circulation**
Alkali Flat has a platting pattern that promotes strong building frontages along streets. The form-based code should emphasize:
- Bringing buildings up to the street frontage and orienting building entrances to face it.
- Reducing parking standards and requiring that surface parking be located to the rear or side of buildings.

**Building Form**
The buildings in Alkali Flat effectively create a strong neighborhood character. In addition, the neighborhood has a number of historically significant buildings. The form-based code should emphasize:
- The quality of infill development, and ensuring that the bulk, height, massing, and siting of new buildings (regardless of their use) be compatible with established neighborhood patterns and historic buildings.

**Land Use**
Alkali Flat has experienced a conversion of existing residential buildings to other, non-residential uses. This has created concern about the effect these conversions may have on the neighborhood’s residential character. The form-based code should emphasize:
- The appropriate location of use conversions.
- Compatibility with residential uses when buildings are converted to non-residential uses through controls on hours of operation, on-site parking, commercial and office signage, etc.
Alkali Flat’s Victorian residential structures share similar detailing and spatial features such as the “delta basement.” The form-based code should:

- Emphasize important neighborhood-defining characteristics (such as vertical and horizontal breaks in building massing) and incorporate these features into the design of new buildings, while respecting modern materials and construction methods, and not requiring the mimicking of Victorian detailing.

Alkali Flat is characteristic of older urban neighborhoods, with a developed street grid that promotes good circulation for all modes and a fine-grained block size that promotes good urban form. The form-based code should focus on:

- Enhancing the street and sidewalk network to offer safe and convenient pedestrian access, especially along major traffic streets.

A street-frontage hybrid type of form-based code is recommended for Alkali Flat. Street design is already established in this area; therefore, the main job of the form-based code is to match the building frontages to the street type. The hybrid allows for some flexibility to mix and match street type to building type, which will be useful in dealing with areas where two or more frontage types are allowed (or required) on certain streets, such as arterials.
Define the general planning area and desired outcome

The planning area should be generally defined during this phase primarily to clarify the approximate area affected and the project scope. In many cases, including the Alkali Flat example, an official neighborhood boundary has been established.

**TIP**

Existing, defined neighborhood boundaries may often be appropriate for delineating a form-based code planning area. However, these areas should be evaluated for their functionality as walking neighborhoods. Streets typically should not be used as boundaries, because the streetscape design, site design of abutting properties, and the design of building frontages should be done holistically to create a successful integration of land uses and a pleasant pedestrian environment. Therefore, form-based code planning area boundaries should include both sides of streets that bound the area.
**Form-based code organization and regulatory approach**

For an existing urban neighborhood, the planning effort often should focus on how to allow infill redevelopment, which complements the neighborhood. A building type-based form-based code is an appropriate organizational structure to use in this case, because it places more emphasis on building form and architecture and the relationships between new development and the context of its surroundings.

**Project team and primary participants**

The project team, including city staff and consultant assistance, should be identified and organized during this step. Neighborhood representatives, property and business owners, and local residents should be invited to participate in the form-based code effort from the beginning. In this case, the city has initiated a conversation with the neighborhood about how to address a variety of planning issues, including the possibility of using a form-based code.

**TIP**

The community should invest some time at the beginning to identify the issues related to the existing conditions, what degree of change is desired at a conceptual level, the stakeholders and parties to be involved, the project process, and the desired outcome. In areas where architectural compatibility is important and/or where historic structures are recognized by the community (even if not by state or federal governments), architects, historians, and other experts should be involved in helping the community define important neighborhood and building characteristics that need to be presented and promoted in new development.
Analysis of existing conditions

As noted in Section 2, the use of aerial photos, street maps, survey or assessor’s maps, and available GIS maps is essential to cataloging planning area conditions in a way that is easily understood by planners, designers, and residents alike. Photos showing representative samples of existing development in the neighborhood are also helpful where integration with neighborhood character is important.

Public realm and street design

A fine-grained grid street system is commonly found in older neighborhoods, and Alkali Flat is no exception. The streets are generally pedestrian-friendly, featuring landscape strips between the curb and sidewalk, mature street trees, and on-street parking. Two streets, 12th and 16th, carry significant traffic volumes, are less pedestrian-friendly, and function primarily as through routes connecting destinations outside of Alkali Flat.

Site design and circulation

The circulation of all modes is generally very good due to the existing street grid and quality of the streets, as noted above. The character of developed properties varies, featuring commercial, mixed-use, and residential buildings oriented to the street and newer multi family and commercial development that often has surface parking adjacent to the street.

Building form

Residential areas consist primarily of older, detached single-family homes and multi-family buildings of varying ages.

Land use

The district includes a central area of predominantly residential uses, with commercial businesses located along 12th and 16th streets and industrial uses along the northern edge of the district.

Architecture

There is a wide range of architectural styles in Alkali Flat from Victorian homes dating from the mid-1800s to contemporary architecture.

Plan and code audit

The relevant plan and code documents should be evaluated as they pertain to the identified planning area. The purpose of the audit is to identify the portions of the plan and code that are relevant to the five form-based code elements (public realm and street design, site design and circulation, building form, land use, and architecture).

Remember that a form-based code is a means to help achieve the Blueprint Growth Principles. Developing a checklist similar to the one presented in Section 2 will help facilitate an efficient and thorough evaluation. In this case, key considerations may include:

- Building frontages and entries oriented to the street
- Minimizing on-site surface parking, especially along street frontages
- Building scale and setback transitions between different uses and building types
- Exploring possible methods for addressing residential to commercial use conversions
Community outreach and involvement

The purpose of the outreach program is to:

- Validate the planning area boundary, existing conditions analysis, and plan and code audit in Step 2;
- Identify issues to be resolved during Step 3;
- Participate in developing the vision and illustrative plan in Step 3; and
- Help develop the important regulating plan and program to implement the vision in Step 4.

During the December 2007 form-based code workshop in Alkali Flat, the participants identified the following issues, which are representative of other urban infill situations:

- Identify neighborhood-defining characteristics, including historic character and architectural detail.
- Define quality of infill and how it relates to surrounding buildings.
- Address land use flexibility while controlling residential-to-office conversions and their spot zoning effect.
- Establish performance standards for maintaining compatibility with residential areas.
- Explore an alternative design approval process that allows a “flexible” approach to guidelines as an option to meeting prescriptive development standards (a two-track process).

TIP

As discussed in Section 2, a charrette is an effective way to develop a form-based code. In historic districts and surrounding areas of transition, such as business districts or redevelopment sites, it is critical to consider available historic information and designations as part of the existing conditions analysis. Historic preservation stakeholders and agency representatives need to be directly involved in the charrette process.

TIP

As part of the analysis of existing conditions, consider conducting a market analysis to determine the demand for office conversions or retail, in order to balance real estate trends with land use policy for the area.
Strategy A: Emphasis on quality and compatibility of infill in residential areas

This strategy assumes the community has completed an effort to identify important neighborhood-defining elements. These may include street design, site design (building siting, setbacks, location of parking), building form (bulk, height, massing, roof forms, and building orientation), and architectural details (window proportions, location of major vertical and horizontal breaks in building massing). This exercise would include specific street frontages where the preservation or continuation of these characteristics is desired.

The form-based code would establish development and design standards for new buildings and modification of existing buildings, consistent with neighborhood characteristics identified by the community. Emphasis would be on establishing or creating a consistent pattern of development on both sides of a street, and ensuring compatible development and the perpetuation of a harmonious streetscape and building frontage. Therefore, the form-based code would allow the use of the building or site to change from single- to multi-dwelling, as long as the development and design standards were met (see page 89).

A regulating plan would specify where the design/development standards apply and where they are required or optional.
Strategy B: Emphasis on limiting office conversions

This strategy assumes that there are areas within the neighborhood where residential-to-office or retail conversions are acceptable, such as along arterial streets where residential living—at least at the ground level—is not viable because of noise and traffic impacts.

As in Strategy A, the form-based code would establish design and development standards for the design of new buildings and modification of existing buildings, consistent with the community’s character. In these locations, however, compatibility with existing residential structures may be less important. This strategy may allow buildings along arterial streets to be taller and occupy more of the site, and not require new buildings to incorporate specific architectural detailing.

As in Strategy A, the purpose of the design and development standards is to ensure compatible development and the perpetuation of a harmonious streetscape and building frontage. The design and development standards would also control the transition of buildings toward the rear of the site, where they abut residential lots.

A regulating plan would specify where the design/development standards apply and where they are required or optional.
Strategy C: Emphasis on transitions with surrounding development

This strategy is focused on compatibility between the established character of the Alkali Flat neighborhood and new development in surrounding districts. As in Strategies A and B, the community must identify the important neighborhood-defining elements to be protected. Where Strategy A is inwardly focused, this option would emphasize proper transitions along the border of the Alkali Flat neighborhood. The design considerations would be similar to Strategy A.

Delineation of the FBC planning area would be particularly important to facilitate a comprehensive design approach, which provides appropriate design transitions between neighborhoods of different character. A common mistake is to use streets as the boundary between districts with different design and development regulations on each side. Because a great street features integrated design of the roadway, sidewalks, public spaces, and buildings, development with different characteristics on opposite sides typically compromises its overall quality. In addition, most of the activities associated with any land use, such as vehicular access, parking, and pedestrian activity, occur along the street. Because of this interaction along the street, the physical character of development and the associated land uses should be planned holistically.
step one ➔ step two ➔ step three ➔ step four ➔ step five

what do we need?

Urban infill: Alkali Flat

street-frontage hybrid regulating plan

form-based code components...regulating plan
### Step One: What Do We Need?

**Things to consider:**
- Identify neighborhood-defining characteristics, including historic character and architectural detail.
- Define quality of infill and how it relates to surrounding buildings.
- Address land use flexibility, while at the same time controlling residential-to-office conversions and spot zoning effects.
- Establish performance standards for maintaining compatibility with residential areas.
- Explore an alternative design approval process that allows a “flexible” approach to guidelines as an option to meeting prescriptive development standards (a two-track process).

### Step Two: Street-Frontage Hybrid Development Standards Table (specifies frontage types)

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<th>Public Realm/ Streetscape/ Connectivity</th>
<th>Neighborhood Commercial Street</th>
<th>Neighborhood Residential Street</th>
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14. Rowhouse: An attached house type on its own parcel with a rear yard and individual garage accessed from an alley in an array of at least 3 such structures along the primary frontage.

1. Lot Width: Minimum: 75 ft; maximum: 150 ft (6 rowhouses)

2. Access Standards
   a. The main entrance to each unit shall be accessed directly from and face the street.
   b. Garages and services shall be accessed from an alley.

3. Parking Standards
   a. Required parking shall be in a garage, which shall be detached from the dwelling.

4. Open Space Standards
   a. Rear yards shall be no less than 25% of the area of each lot and of a regular geometry.
   b. Front yards are defined by the applicable setback and frontage type requirements.

5. Landscape Standards
   a. Landscape shall not obscure front yards on adjacent lots.
   b. Front yards trees shall not exceed 1/5 times the height of the porch at maturity, except at the margins of the lot, and shall not be placed in a way that makes living areas (e.g., living room, family room, dining room, etc.) rather than sleeping and service rooms, are oriented toward the front street and/or to the courtyard to the degree possible.
   c. Front yards trees shall be no more than 1.5 times the height of the porch at maturity.
   d. Trees shall be planted at the rate of one box tree per 25 linear feet of front yard. Trees can be in groups in order to achieve a particular design.
   e. At least one 24-inch canopy tree shall be provided in the rear yard for shade and privacy.
   f. Six, five-gallon size shrubs, ten one-gallon size herbaceous perennials/shrubs, and turf or acceptable dry climate ground cover is required for every required tree.
   g. All plant material shall be maintained per the UDC.
   h. All plant material shall be irrigated by an automatic irrigation system.
   i. In RIO 2, a minimum of 50% of the open space shall be planted and in RIO 3, a minimum of 25% of the open space shall be planted (Table 673-2 of UDC).

6. Frontage Standards
   a. Each rowhouse ground level shall be designed so that living areas (e.g., living room, family room, dining room, etc.), rather than sleeping and service rooms, are oriented toward the fronting street and/or to the courtyard to the degree possible.

7. Building Size and Massing Standards
   a. The massing of this type shall endeavor to articulate both the individual dwelling and the scale of the array of attached dwellings.

8. Accessory Dwellings
   Please refer to section 35-371 of the UDC

DEVELOPMENT STANDARDS

IN DECEMBER 2007, ALKALI FLAT COMMUNITY WORKSHOP PARTICIPANTS EXPRESSED A DESIRE TO PROTECT AND ENHANCE HISTORIC ARCHITECTURE WHILE NOT REQUIRING NEW DEVELOPMENT TO IMITATE THE DETAILING OF HISTORIC BUILDINGS. DEVELOPMENT AND DESIGN STANDARDS BASED ON BUILDING TYPES ENCOURAGE NEW DEVELOPMENT THAT IS COMPATIBLE IN SCALE, HEIGHT, AND MASSING. THIS APPROACH ALLOWS MODERN MATERIALS AND METHODS TO BE USED, AND AVOIDS SUPERFICIAL IMITATION OF HISTORIC STYLES. THIS PAGE IS AN EXAMPLE OF DEVELOPMENT AND DESIGN STANDARDS BASED ON ARCHITECTURAL TYPES FROM THE RIVER NORTH DISTRICT MASTER PLAN, SAN ANTONIO TX.
THE AMERICAN FOURSQUARE

History and Character

Known by a variety of names, including Edwardian, American Basic, and the Basic Box, the American Foursquare made its appearance just after the turn of the 20th Century and reached a boom period around World War I. The American Foursquare design shares the Craftsman Bungalow’s virtues of practicality, simplicity and value. Many people considered it the most practical of all housing types, heralding the American Foursquare as "the typical Midwestern farmhouse." Besides being more stylish to a new market of homebuyers, the Foursquare design was cheaper to build than its Victorian counterpart. The Foursquare design had no towers, turrets, sweeping verandas or turned ornament. The box shape took advantage of every buildable inch, taking full advantage of small city lots and tiny building budgets.

DESIGN GUIDELINES

Another approach to encouraging compatibility without requiring imitation of historic architecture is through optional design guidelines. In this example, simple drawings and photographs are used to communicate the essential features of a particular historic building style.

form-based code components...design guidelines
Proper integration with the existing code
Infill development and redevelopment should be regulated in a predictable manner throughout the planning area to help create a consistent neighborhood character. To support a consistent policy regarding infill development in Alkali Flat, the FBC should feature standards and guidelines that would apply to all new development.

Make it readable
Because the form and architectural character of new infill development is particularly important, the FBC should be richly illustrated with building form diagrams and architectural styles and details. The building type-based example in Section 1 and the sample illustrations presented earlier in this case study are indicative of this approach. The city currently has good examples to draw from, including its design guidelines.

TIP
Form-based code standards and guidelines must take special care to be well integrated with existing requirements for historic resources.

Road test
Once the draft code provisions are completed, they should be tested using past and/or anticipated development applications to determine how well the draft addresses real world development and design issues. Staff should apply the new form-based code and other zoning ordinance procedures and requirements to determine whether the draft code would enable successful plan implementation without being unnecessarily burdensome to the applicant. All staff responsible for development review and approval should be involved in this evaluation, including, but not limited to planning, public works, and building officials. Agency and/or community experts in historic preservation and architecture should also be involved.

Monitoring performance
After the code provisions have been adopted, their performance should be monitored by staff. The questions used during the initial road test should continue to be asked as development application reviews are completed. Problem areas should be recorded, and an annual update amendment process is recommended.

step one — step two — step three — step four — step five
how do we get there?
Suburban infill: Citrus Heights

Characteristics

The Auburn Boulevard Corridor is similar to many major urban transportation corridors in the region, which are lined primarily with auto-oriented commercial businesses, light industrial and employment activities, and a variety of single and multi-family residences. Surface parking usually lies between the buildings and the street.

Access is provided via a major street corridor and like the adjoining development, the street is designed with a bias toward vehicular use and motorist convenience. Traffic speeds are fairly high, and pedestrian amenities such as wide sidewalks (or any kind of sidewalks), on-street parking, or buffering between pedestrians and the traffic, are not provided or are incomplete. Pedestrian crossing opportunities are typically limited, and these major street corridors function as barriers, which separate neighborhoods and thwart local circulation for vehicles, pedestrians, and bicyclists.

the issues...

common suburban infill issues to be addressed with form-based code include:

- Lack of good pedestrian and vehicular connectivity (prevalence of large blocks and cul-de-sacs limit bicycle and pedestrian choices)
- Current site development standards do not promote good internal pedestrian and vehicular connections within parking lots
- Buildings are set back behind large surface parking lots, and do not address the street
- Lack of transition between retail uses along the major corridor and residential uses behind

the site: suburban commercial corridor
Like many major traffic corridors in the region, there is a considerable amount of through traffic, and the businesses are often oriented to this customer base, and the surrounding neighborhoods represent a secondary market. In this case, the corridor is planned to evolve from an aging commercial corridor into a series of community-serving centers. The Boulevard Plan, adopted by the city in 2005, defines four individual districts along Auburn Boulevard. One of these districts, Rusch Park, is identified as a “village center” in the Auburn corridor. It is the subject of this case study.

EXISTING CONDITIONS

THE PHOTOS ABOVE ILLUSTRATE EXISTING CONDITIONS ALONG AUBURN BOULEVARD IN CITRUS HEIGHTS. BUILDINGS ARE SET BACK FROM THE STREET BEHIND LARGE SURFACE PARKING LOTS, WITH NO CLEAR SENSE OF INTERNAL VEHICULAR OR PEDESTRIAN CONNECTIVITY, AND RESIDENTIAL USES THAT LINE THE CORRIDOR EFFECTIVELY TURN THEIR BACKS, RATHER THAN ADDRESS THE STREET.
EXISTING CONDITIONS

THE PHOTO ABOVE LEFT ILLUSTRATES HOW BUILDINGS ALONG AUBURN BOULEVARD ARE TYPICALLY SET BACK BEHIND SURFACE PARKING LOTS, AND FAIL TO ADEQUATELY ADDRESS THE STREET. THE PHOTO AT RIGHT IS AN EXAMPLE OF A BUILDING WHICH BEGINS TO ADDRESS THE SIDEWALK AND PROVIDES CLEAR PEDESTRIAN LINKAGES, CREATING A MORE PLEASANT ENVIRONMENT AT THE SIDEWALK LEVEL.
Auburn Boulevard is characteristic of older suburban arterial streets with minimal sidewalks located adjacent to the travel lanes. The form-based code should focus on:

- Changing the auto-oriented streetscape into one that is more pedestrian-friendly with wider sidewalks, street trees, on-street parking where possible, and buffering between pedestrian areas and travel lanes.
- The commercial corridor and include adjoining areas to create a functional neighborhood with a ¼-mile walking radius.
- Creating or enhancing the street and sidewalk network to offer safe and convenient pedestrian access throughout the planning area and surrounding activity centers.
- Determining which streets offer the best opportunities for creating good pedestrian environments and maximize their potential in the vision and regulating plan.
- Involve the agency or department staff responsible for street design and maintenance to facilitate the planning and implementation of streetscape improvements.

Buildings along typical suburban corridors are set back from the street, with surface parking adjacent to the street. The form-based code should emphasize:

- Bringing buildings up to the street frontage.
- Reducing parking standards and requiring that surface parking be located to the rear of side of buildings.
- Orienting building entrances to face the street.
- Creating a policy and ordinance approach to address the nonconforming situations, which will arise when new pedestrian-oriented development standards are applied to the existing auto-oriented development pattern.
Land Use

Zoning ordinances in suburban areas often do not allow mixed-use development. In order to create more active, pedestrian-oriented places, such as the village center in Rusch Park, the following land use elements should be in place:

- Allowing mixed-use development, including a vertical combination of uses.
- Requiring active ground floor uses (or viable ground floor spaces for commercial activities) along key street frontages and street intersections.

Architecture

Suburban infill situations along commercial corridors sometimes do not display any unique architectural characteristics that are valued by the community. In existing as well as new buildings, the form-based code should emphasize:

- Storefront character window frontage that emphasizes the pedestrian level.
- Weather protection such as awnings.
- Pedestrian-scaled signage that is incorporated into the design of buildings.

Form-based code type:

- **Street-frontage hybrid**
- **Building type-based**
- **Modified transect**

The street-frontage hybrid type of form-based code is recommended for Auburn Boulevard in Citrus Heights. Auburn Boulevard streetscape improvements have been adopted and capital improvements are programmed, therefore the primary job of the form-based code in this situation is to ensure that as buildings redevelop, they are designed to improve the pedestrian environment and provide a mix of uses along the boulevard.
**Define the general planning area and desired outcome**

The planning area should be generally defined during this phase primarily to clarify the approximate area affected, the project scope, and the desired results. In this instance, the city identified a need for a significant change to the character of Auburn Boulevard as desired in The Boulevard Plan, which was adopted by the city in 2005. The corridor planning area is an example of establishing boundaries that include a commercial service focus and the surrounding neighborhood within about ¼-mile of Auburn Boulevard.

**TIP**

*In selecting a boundary for this form-based code type, major streets should not be planning boundaries, but rather they should be a central focus. Auburn Boulevard currently acts as barrier between the neighborhoods on the east and west sides of the street. It will be particularly important to create design solutions, which will help integrate the street with adjoining development and the surrounding neighborhoods. Because significant change is not anticipated or necessarily desired in the adjoining residential neighborhoods, only a portion of these areas are typically included to provide appropriate transitions between the commercial corridor and adjacent residential areas.*
Form-based code organization and regulatory approach

In the suburban infill situation, the community interest will often be to improve the streetscape and development character along major streets, such as Auburn Boulevard. A frontage-based form-based code is an appropriate organizational structure to use in this case, because it places more emphasis on an integrated design of the street and adjacent development frontages, matching improved building and site design to already planned and funded improvements to the street.

Project team and primary participants

The project team, including city staff and consultant assistance, should be identified and organized at this time. Neighborhood representatives, property and business owners, and local residents should be invited to participate in the form-based code effort from the beginning.

TIP

The community should invest some time at the beginning to identify the issues related to the existing conditions, what degree of change is desired at a conceptual level, the stakeholders and parties to be involved, the project process, and the desired outcome.

TIP

In situations where creating a more pedestrian-friendly streetscape is of primary importance, agency and/or department staff responsible for street design, maintenance, and emergency services must be involved from the beginning. The best urban design concepts can be easily undone if the streetscape does not change to complement the adjoining development.
Analysis of existing conditions

As noted in Section 2, the use of aerial photos, street, maps, survey or assessor’s maps, and available GIS maps is essential to cataloging planning area conditions. The base map used in The Boulevard Plan would be suitable for this purpose. A detailed analysis of existing conditions was not conducted as part of the case study, but the general characteristics of the Rusch Park District are summarized below:

Public realm and street design

Auburn Boulevard is characteristic of older suburban arterial streets with minimal sidewalks located adjacent to the travel lanes. Rusch Park is a significant public park located in the southwest portion of the district, but it is the only important public area in the district.

Site design and circulation

Typical of other suburban corridors, buildings along Auburn Boulevard are set back from the street, and they typically have surface parking between the building and the street. East-west streets have off-set alignments across Auburn Boulevard, inhibiting easy neighborhood access across this street. When four-way intersections are present, the width of the main street can make pedestrian crossings difficult. Good street connectivity is sometimes lacking (as evident on the east side of Auburn Boulevard) and block lengths are often significant, making local circulation more difficult for all modes.

Building form

Buildings in the district are predominantly one-story. Setbacks are normally provided from all property lines.

Land use

A variety of commercial uses line both sides of Auburn Boulevard. Detached single-family residences are the predominant use behind the commercial activities along Auburn Boulevard. Some medium density multi-family buildings are located in the northern end of the district. The western side of the district is totally developed and the eastern side has a significant number of oversized parcels and their associated redevelopment potential.

Architecture

Suburban infill situations along commercial corridors sometimes do not display any unique architectural characteristics that may not be consistent with the community’s vision for itself.
Plan and code audit

The relevant plan and code documents should be evaluated as they pertain to the identified planning area. The purpose of the audit is to identify which portions of the plan and code are relevant to the five form-based code elements - public realm and street design, site design and circulation, building form, land use, and architecture. The built character of most suburban infill locations has been heavily influenced by zoning regulations. Parking standards, mandatory front yard building setbacks, minimal landscaping requirements, lack of pedestrian and cyclist accommodation, and limited street connectivity are mainly the result of zoning standards. The audit will clarify where the current zoning code discourages or supports the Blueprint Growth Principles. The portions of the existing plan or code that need to be changed should be identified.

TIP

As part of the analysis of existing conditions, consider conducting a market analysis to determine the viability of different types of retail and to quantify the total square footage of retail that is supportable along the corridor. Use this information to determine whether the area zoned for general commercial should be modified or reduced to correlate with real estate trends. A market analysis can also help locate areas where a synergistic mix of uses might be cultivated because of neighborhood and/or regional access and visibility.

TIP

Remember that a form-based code is a means to help achieve the Blueprint Growth Principles. Developing a checklist similar to the one presented in Section 2, will help facilitate an efficient and thorough evaluation.
Community outreach and involvement

The city conducted an extensive community involvement program to develop The Boulevard Plan in 2005. Because the introduction of a form-based code would be another tool to help implement the plan, the city should assemble the same interest groups and participants. The purpose of the outreach program is to:

► Validate the planning area boundary, existing conditions analysis, and plan and code audit in Step 2;
► Identify issues to be resolved during Step 3;
► Participate in developing the vision and regulating plan in Step 3; and
► Helping develop the important regulating plan elements to implement the vision in Step 4.

During the December 2007 form-based code workshop in Citrus Heights, the participants identified the following issues related to the Rusch Park District, which are representative of other suburban infill situations:

► The need to have better connectivity.
► The current street character is not pedestrian-friendly.
► Network capacity is lacking because a fine-grained street system is not available for convenient access to all modes, and all trips are forced to use major streets, which are often at capacity during peak hours.
► Land uses (e.g., commercial, residential) are separated.
► A variety of housing types should be available.
► Neighborhood identity should be enhanced.
► Large format retail uses need to be better-integrated with surrounding development.

As discussed in Section 2, a charrette is an effective way to develop a form-based code. In this case key stakeholders should include:

• Residents
• Business and property owners
• Developers
• Public works and engineering staff
Because a Form-Based Code must be a reflection of the community’s desired “vision,” public participation is crucial during the planning process.

PUBLIC PARTICIPATION

BECAUSE A FORM-BASED CODE MUST BE A REFLECTION OF THE COMMUNITY’S DESIRED “VISION,” PUBLIC PARTICIPATION IS CRUCIAL DURING THE PLANNING PROCESS.
Strategy A: Streetscape and building frontage improvements along the corridor/primary arterial

This strategy builds off of an adopted streetscape plan and funded capital improvements. It establishes a regulating plan and development/design standards for buildings fronting the primary corridor/arterial street. This is similar to the approach taken in The Boulevard Plan with a village center on the west side of Auburn Boulevard.

translating the vision into a form-based code: **three strategies for a suburban infill community**
Strategy B: Emphasis on the cross streets

This strategy assumes there will be no immediate change to the primary corridor/arterial, either because the local community does not control its design (design is controlled by the state or county), or a streetscape design and capital improvements have not been completed. Therefore this interim strategy emphasizes the cross streets and extending the pedestrian environment perpendicular to the main street.

The form-based code would establish a regulating plan and development and design standards for street design and building frontage along these secondary streets.

STRATEGY B
STRATEGY B FOCUSES ON THE INTERSECTING PERPENDICULAR STREETS TO MITIGATE FOR LACK OF STREETSCAPE CONTROL ALONG THE ARTERIAL. STREETSCAPE AND BUILDING DESIGN STANDARDS ARE INTENDED TO CREATE PEDESTRIAN-FRIENDLY ENVIRONMENTS ALONG THESE CROSS STREETS.

translating the vision into a form-based code: three strategies for an urban infill community
An additional interim step involves improving pedestrian, bike and vehicular connections through parking lots. A regulating plan and development/design standards would be established to provide direct connections from corridor transit stops and intersections to retail front doors. Development/design standards would require amenities such as parking lot drive aisles that include sidewalks and street trees.

STRATEGY B
STRATEGY B ALSO SUGGESTS CRAFTING STANDARDS FOR PARKING LOT DESIGN ALONG THE ARTERIAL TO IMPROVE PEDESTRIAN, BICYCLE AND VEHICULAR CONNECTIONS AS WELL AS AESTHETICS.

translating the vision into a form-based code: three strategies for a suburban infill community
Strategy C: Special planning area

This strategy encourages property owners, developers, and architects of large parcels to develop their own form-based codes as part of their land division (subdivision), site design, and/or building application. The City can make such an option available through an overlay or “floating” overlay zone provision in the code.

translating the vision into a form-based code: three strategies for an urban infill community
Preferred strategy: Form-based code components

**frontage-based regulating plan**

The image at left illustrates how a street-frontage hybrid regulating plan might look on a generic street grid. A street-frontage hybrid form-based code establishes the character and design of the various street types within a community, and building design and frontage standards are established independently of street types. The regulating plan simultaneously indicates both street type (color coded within the street area) and the building frontage types (color coded along the block face behind the street).
For each frontage type, **public realm and streetscape/connectivity standards** would establish ways to achieve greater pedestrian and vehicular connectivity, identify standards that can be applied through land division/subdivision and building approvals, and define design standards for internal connections (such as through parking lots). Specific standards would include minimum spacing for public and private streets.

For each frontage type, **site design and circulation standards** would include the design of parking, auto access and landscaping, as well as the location of buildings on the site. Specific standards would include minimum and maximum site coverage, as well as thresholds or trigger points at which development is required to come into compliance with development standards. Triggers could be based upon the total square footage of the improvement or redevelopment, or the total cost.

For each frontage type, **building form standards** would include how buildings are oriented to streets, especially to the new streetscape design, and how retail areas transition in use and scale to residential areas. Specific standards would include all setbacks, minimum and/or maximum building height, and minimum facade area required to provide storefront character and visibility.
5.2.000. THE REGULATING PLAN

5.2.040. Street Typologies

5.2.040.A. Avenue–4 Lane (with single turn lane)

<table>
<thead>
<tr>
<th>Through/Front type</th>
<th>Through Traffic Lanes</th>
<th>Turning Lanes</th>
<th>Parking Lanes</th>
<th>Curb Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avenue (urban)</td>
<td>4 lanes, 2 bicycle lanes</td>
<td>1 left turn lane</td>
<td>8 feet, each side</td>
<td>ns</td>
</tr>
<tr>
<td>Street (residential)</td>
<td>Avenue: 110-125 feet</td>
<td>Property line: 5 feet</td>
<td>Public row: 36 feet</td>
<td>ns</td>
</tr>
</tbody>
</table>

1. Purpose and Intent

- Avenue–4 Lane streets connect a high amount of residential or other land uses, providing a high amount of vehicular traffic.
- Bicycle lanes, on street parallel to pedestrian facilities, help to reduce pedestrian conflicts.
- The median in the center of the road provides additional traffic capacity and helps to reduce conflict zones.
- Travel speeds are slow to moderate, which is preferred for pedestrian safety.
- Street lighting and landscaping are preferred due to the high traffic volume.
- Surface parking lots or fronting these types of streets help to reduce the amount of traffic and provide additional parking spaces.
- This street typology may be used in the Regional Town Center, if possible, this typology should be avoided in the Transit Areas of Village Center Zones.
- This street typology may be adapted to accommodate light rail transit, bus rapid transit, or streetcar alignments.

STEPSCAPE AND BUILDING DESIGN STANDARDS

BUILDING FRONTAGE STANDARDS WOULD BE ILLUSTRATED IN PLAN AND SECTION AND ACCOMPANIED BY DIMENSIONAL STANDARDS. IN THIS EXAMPLE, A RANGE OF BUILDING FRONTAGE TYPES ARE LINKED TO PRE-DETERMINED STREET TYPES, SUCH AS THE IMPROVED AUBURN BOULEVARD. PROVIDING A RANGE OF BUILDING FRONTAGE TYPES OFFERS PROPERTY OWNERS AND DEVELOPERS FLEXIBILITY IN HOW THEY MEET THE STANDARDS. FRONTAGE ILLUSTRATIONS ARE ARRANGED ON THE PAGE TO ALLOW THE USER A QUICK COMPARISON OF THE OPTIONS AVAILABLE.
Proper integration with the existing code

The strategy for many suburban infill and redevelopment sites is to transform their character over a period of time, and the appropriate timing for implementing this type of change will vary from location to location. Therefore, the city could integrate the FBC by applying it to a specific district under the “Special Planning Area Development Standards” in the zoning code or as floating zone, which could be applied at the request of the developer.

Make it readable

Recent city documents, including The Boulevard Plan and the Zoning Code, are good examples of readable documents. The FBC should continue with the clear presentation style of these documents.

Road test

Once the draft code provisions are completed, they should be tested using past and/or anticipated development applications to determine how well the draft addresses real world development and design issues. Staff should apply the new form-based code and other zoning ordinance procedures and requirements to determine if the draft code would enable successful plan implementation without being unnecessarily burdensome to the applicant. All staff responsible for development review and approval should be involved in this evaluation including but not limited to: planning, public works, emergency services, and building officials.

Monitoring performance

After the code provisions have been adopted, its performance should be monitored by staff. The questions used during the initial road test should continue to be asked as development application reviews are completed. Problem areas should be recorded, and an annual update amendment process is recommended.

TIP

When the aspirations are not consistent with the built form, there will be many nonconforming developments (e.g., parking lots in front with the form-based code requiring build to lines). This is common where a city wants to change the basic developed character of an area. The existing nonconforming development requirements in the zoning code should be evaluated and amended to reach a balance between implementing the vision and regulating plan without causing undue strain on nonconforming properties.
Small downtown infill: Auburn

the site: small downtown

Much of a small city’s identity is tied to its downtown. Because many small cities were founded before the automobile, their scale and character are clearly geared for pedestrians with storefront buildings, active ground floor uses, small blocks, and unique or historic architecture. Commercial activities are concentrated along the main streets, and residential neighborhoods are located adjacent to the commercial districts.

Auburn is an example of such a downtown. The original city center, referred to as “Old Town,” was developed in the mid-1800s during the Gold Rush. As the city matured, a “Downtown” developed in the late 1800s and early 1900s. These two areas, within walking distance of one another, form the city’s downtown. A significant characteristic of this small town is the dramatic grade changes that occur throughout the two areas.

Characteristics

Auburn

The original city center, referred to as “Old Town,” was developed in the mid-1800s during the Gold Rush. As the city matured, a “Downtown” developed in the late 1800s and early 1900s. These two areas, within walking distance of one another, form the city’s downtown. A significant characteristic of this small town is the dramatic grade changes that occur throughout the two areas.

the issues...

common small downtown infill issues to be addressed with form-based code include:

- Ensuring that new development is compatible with downtown’s historic architecture
- Ensuring that new multi-family development is compatible with existing single-family development
- Providing a cohesive “step down” in use and building mass as one moves back from the downtown area into single-dwelling neighborhoods
existing conditions...
Small downtown infill: Auburn  THE CASE STUDIES

EXISTING CONDITIONS
DOWNTOWN

DOWNTOWN AUBURN IS CHARACTERISTIC OF MANY SMALL DOWNTOWNS WITH HISTORIC ARCHITECTURE. THE COMMUNITY HAS VOICED CONCERN THAT NEW DEVELOPMENT IN BOTH DOWNTOWN AND THE OLD TOWN BE COMPATIBLE WITH THE EXISTING FABRIC IN THESE AREAS.

Above and at left are photographs of existing conditions in Downtown Auburn.
EXISTING CONDITIONS
OLD TOWN

OLD TOWN AND DOWNTOWN BUILDINGS ARE CHARACTERIZED BY DRAMATIC GRADE CHANGES THAT AFFECT THE SITING AND DESIGN OF BUILDINGS. THE FORM-BASED CODE SHOULD INCORPORATE SPECIAL CONSIDERATIONS INTO THE DEVELOPMENT STANDARDS THAT WILL AchieVE OR MAINTAIN THE COMMUNITY’S DESIRED BUILDING FORM WHILE MEETING ACCESS REQUIREMENTS. ABOVE AND TO THE RIGHT, PHOTOS OF OLD TOWN BUILDINGS SHOW THE TYPICAL ELEVATION CHANGES THAT OCCUR ACROSS THE WIDTH OF BUILDINGS ALONG THE STREET FRONAGE.
SIGNATURE BUILDINGS

SPECIAL BUILDINGS, SUCH AS THE COUNTY COURTHOUSE (ABOVE), WHICH SITS BACK FROM THE STREET THAT CONNECTS OLD TOWN AND DOWNTOWN SHOULD BE CONSIDERED EXEMPT FROM FORM-BASED CODE REGULATIONS THAT MAY APPLY TO DOWNTOWN OR OLD TOWN. THESE MONUMENTAL BUILDINGS, AND FUTURE SITE DESIGN AND/OR MODIFICATIONS OR ADDITIONS MAY DESERVE SPECIAL DEVELOPMENT STANDARDS.
most important for Auburn

**Building Form**

The commercial, mixed-use, and residential buildings in the Old Town and Downtown have distinctive form that helps define the different characteristics of these two areas. In addition, in both Old Town and Downtown, significant grade changes across sites present design and access challenges. The FBC should offer standards and guidance to achieve and maintain desired urban form while meeting access requirements. The form-based code should emphasize:

► Building scale and setbacks that are consistent with the prevailing character of surrounding development.
► Transitions provided by building scale and setback treatments to enhance compatibility between different building types and land uses.

**Land Use**

The city zoning currently allows a healthy mix of uses in the Old Town and Downtown areas. The form-based code should:

► Support continuation of mixed-use development.
► Consider higher density residential uses in appropriate areas with other form-based design standards to address compatibility between different building and use types.

**Architecture**

The unique architectural characteristics of the Downtown area are valued by the community. The form-based code should feature:

► Recognition of the differences in design character between Old Town and Downtown.
► Design treatments that are complementary to the city’s architectural and historic character.
► Standards or guidelines that enable successful infill development in the commercial and residential areas.
► Standards or guidelines that recognize the unique characteristics of selected buildings, such as the county courthouse and the Fire Tower.
► Recognition that the architecture in Old Town is less likely to change from established historic styles.
Small downtown infill: Auburn

The case studies

Small downtown infill: Auburn

Street Design and Connectivity

Auburn’s Old Town and Downtown areas are reasonably pedestrian-friendly now, and the proposed “Auburn UDA Streetscape Master Plan” will provide an enhanced pedestrian route connecting the two districts. The form-based code should focus on:

► How the FBC can be coordinated with the nine-phase streetscape implementation plan to achieve better connections between Old Town and Downtown while maintaining the distinct identities of each.

► Complementary streetscape design improvements to other streets in the Old Town and Downtown.

Site Design and Circulation

Many buildings located along the main commercial streets are appropriately oriented to them. The form-based code should emphasize:

► Bringing new or remodeled buildings up to the street frontage.

► Reducing parking standards and requiring that surface parking be located to the rear or side of buildings.

► Orienting building entrances to face the street.

► Addressing site access and circulation challenges created by significant grade changes that occur across sites.

Form-based code type:

Street-frontage hybrid

Building type-based

☑ Modified transect

(See page 33 for description of FBC types.)

The modified transect type of form-based code is recommended for Auburn because of its emphasis on transitions between areas of different densities, uses, and building siting and form. When it is correlated to the development patterns of Auburn, it will provide an organizational structure that takes into account the community’s concern for a well-designed transition from the Downtown/Old Town areas to the single-dwelling neighborhoods. The modified transect type will also provide an organizational structure for the development/design standards which apply to the two commercial main street districts: Old Town and Downtown.
Define the general planning area and desired outcome

The planning area should be generally defined during this phase primarily to clarify the approximate area affected and the project scope. At a minimum, this area should include the commercial main streets in the Downtown. A form-based code should also be considered to address redevelopment in the adjacent residential neighborhoods. In this case, the city currently has two Architectural Design Districts – one for Old Town and one for Downtown. They include the commercial main streets, as well as the residential areas immediately behind them.

For areas outside of the Downtown and Old Town areas, consider using other FBC types as appropriate. For example, along corridors, use a street-frontage hybrid FBC approach, and for larger land areas (greenfield or infill), consider using a building type-based or modified transect FBC. These approaches can be combined (see page 31 for more information).

TIP

Existing planning districts may provide a starting point in defining the area where a form-based code would apply. Applying a new form-based code within the current Architectural Design Districts to supplement or replace the city’s current standards could make more sense and be less confusing than applying a form-based code to only a portion of the Architectural Design Districts.
Form-based code organization and regulatory approach

For a small city infill situation, the planning effort often should focus on how to allow redevelopment that complements the neighborhood. A modified transect form-based code organization for the two commercial main street districts and the adjoining neighborhoods is an appropriate organizational structure to use in this case. It would provide the appropriate emphasis on the main character-defining features of Downtown and Old Town as well as those of the existing neighborhoods.

Project team and primary participants

The project team, including city staff and consultant assistance, should be identified and organized during this step. Neighborhood representatives, property and business owners, and local residents should be invited to participate in the form-based code effort from the beginning.

TIP

The community should invest some time at the beginning to identify the issues related to the existing conditions, what degree of change is desired at a conceptual level, the stakeholders and parties to be involved, the project process, and the desired outcome. In this case, architects and individuals who are knowledgeable of the local history and its important historic resources should be involved.
Analysis of existing conditions

As noted in Section 2, the use of aerial photos, street maps, survey or assessor’s maps, and available GIS maps are essential to cataloging planning area conditions in a way that is easily understood by planners, designers, and residents alike. Photos showing representative samples of existing development along the main streets and in the adjoining neighborhoods is also helpful to understand the architectural flavor of the planning area.

Public realm and street design

A fine-grained street system is commonly found in older cities. The streets are generally pedestrian-friendly, featuring landscape strips between the curb and sidewalk, mature street trees, and on-street parking. The city recently completed the “Auburn UDA Streetscape Master Plan” along Lincoln Street and High Street, which link the Old Town and Downtown. As a result of the plan, the City intends to provide sidewalk improvements, streets trees, and a variety of pedestrian amenities.

Site design and circulation

All modes can circulate throughout Downtown and Old Town due to the existing street system. Buildings are generally located next to the street, and most of the parking is provided on-street or behind the buildings, but there are a number surface lots along the street. The neighborhoods behind the main streets have detached single-family residences with front setbacks from the street.

Building form

Development along the commercial main streets may generally be described as one- and two-story buildings with active ground floor businesses. Residential areas consist primarily of older, detached single-family homes.

Land use

The commercial uses are located along Lincoln and High Streets and residential zoning generally applies to the properties behind these streets.

Architecture

There is a wide range of architectural styles in Auburn’s downtown area, including Old Town and Downtown historic styles, and special monumental buildings that deserve special consideration, such as the county courthouse.

Plan and code audit

The relevant plan and code documents should be evaluated as they pertain to the identified planning area. The purpose of the audit is to identify the portions of the plan and code that are relevant to the five form-based code elements (public realm and street design, site design and circulation, building form, land use, and architecture). In this case, the city’s architectural design standards, zoning requirements (both for uses and development standards), and streetscape plan should be evaluated.

Remember that a form-based code is a means to help achieve the Blueprint Growth Principles. Developing a checklist similar to the one presented in Section 2 will help facilitate an efficient and thorough evaluation.

As part of the analysis of existing conditions, consider conducting a real estate/pro forma type analysis to determine the viability of mixed-use buildings in Downtown, and to understand how land values affect the viability of structured parking or residential unit types. Use this information to ensure that development standards work with the market to support desired development and urban form.
Community outreach and involvement

The purpose of the outreach program is to:

► Validate the planning area boundary, existing conditions analysis, and plan and code audit in Step 2;
► Identify issues to be resolved during Step 3;
► Participate in developing the vision and regulating plan in Step 3; and
► Help develop the important regulating plan elements to implement the vision in Step 4.

Public participation

During the December 2007 form-based code workshop in Auburn, the participants identified the following issues, which are representative of other urban infill situations:

► Identify good development patterns, including historic character and building design.
► Define distinguishing characteristics between Old Town and Downtown.
► Establish quality of infill and contextually responsive design.
► Demonstrate acceptable design for multi dwelling development within or abutting single-dwelling residential.
► Address areas in need of revitalization.
► Explore a streamlined design approval process that encourages redevelopment and revitalization (possibly a two-track process).

TIP

As discussed in Section 2, a charrette is an effective way to develop a form-based code. In this case, key stakeholders should include:

- Residents
- Business and property owners
- Architects
- Historic preservationists
- Developers

TIP

It is important to build upon the community’s past design and historic preservation work. In many cases, historic resource inventories, designated buildings and sites, and design guidelines should be acknowledged and integrated into the form-based code.
Strategy A: Emphasis on differentiating districts

This strategy assumes the community has good development patterns—walkable, fine-grained blocks, and a pedestrian-friendly main street lined with mixed-use buildings.

Here the emphasis is on protecting and perpetuating the positive ambiance created by good development patterns. The community desires to emphasize the distinction between two districts, each representing a different era in the community’s history. The community has adopted a streetscape plan and funded capital improvements that build upon these things. This strategy assumes the community has completed an effort to identify important district-defining elements and development patterns.

Using the streetscape plan and the community effort as starting points, the form-based code would establish design and development standards for buildings along the main street, playing up the building form and architectural differences between the two districts.

A regulating plan would specify where the design/development standards apply and where they are required or optional.

Downtown
- historic architecture from several eras - late 1800s to early 1900s
- steep topography
- wider streets

Old Town
- historic architecture from the mid-1800s Gold Rush period
- very steep topography
- narrow, angled streets

translating the vision into a form-based code: two strategies for small downtown infill
Strategy B: Emphasis on compatibility of multi dwelling infill in single dwelling residential areas in the transition area behind a commercial main street

This strategy assumes the community has completed an effort to identify important neighborhood-defining elements for its residential neighborhoods.

The form-based code would establish design and development standards for the design of new buildings and modification of existing buildings, consistent with important neighborhood characteristics. The design and development standards would control the transition of buildings from the commercial core area, with taller, more urban buildings, to the residential area, with smaller detached residential buildings.

The purpose of the design and development standards is to ensure compatible development all along the urban-to-residential transition. Therefore, the form-based code would allow the use of the building or site to change from single dwelling to multi dwelling, as long as the design and development standards were met.

A regulating plan would specify where the design/development standards apply and where they are required or optional.

translating the vision into a form-based code: two strategies for small downtown infill
THE CASE STUDIES Small downtown infill: Auburn

step one ➔ step two ➔ step three ➔ step four ➔ step five

Step four: What do we need?

Modified transect regulating plan

Form-based code components...regulating plan

Regulating Plan

Applying the concept of the transect to a particular planning area often results in a modified version, which responds to local conditions. The modified transect regulating plan at left shows the highest intensity development occurring along corridors, with less intense development tucked within the neighborhood.
Things to consider:

- Determine the defining architectural characteristics in the Old Town and Downtown, including the adjoining single-family neighborhoods.
- Identify the appropriate street frontage design treatments along the main streets that respect and enhance the distinctive architectural character of the Old Town and Downtown.
- Identify an appropriate transect to respect the existing character of neighborhoods while allowing higher density development.

For each zone of the modified transect, **building form standards** would define building frontage types, all setbacks, building height, orientation, and massing, and standards regarding minimum window area and minimum storefront visibility area at the street level.

For each zone of the modified transect, **land use standards** would specify permitted, prohibited, and conditional uses. This section may cross reference to an existing land use provision or provide amended or new land use standards for the mapped transect zones.

For each zone of the modified transect, **architectural standards** would specify facade massing and composition and the design of windows, doors, signage, shopfronts, awnings, materials and applications, residential porches, stoops, and front setback areas.
**Architectural Design Standards**

For a jurisdiction with unique or historic architecture, detailed architectural design standards can provide requirements for important features, as well as visual examples of appropriate architectural design. Sometimes this information is arranged in an architectural pattern book, as shown here.

*Small downtown infill: Auburn*

**Windows & Balconies**

*Standard Windows*

Windows above the ground floor are typically vertical in proportion. Standard windows are double hung with a two-over-two divided light. Rectangular sash and panes are common, as well as split window heads and transoms over windows set in masonry walls.

*Balconies and Galleries*

Upper story balconies are typical on Old Gulf Coast neighborhoods. They are usually decorative metal with ornate balusters and railings. Early balconies were wrought iron. Later balconies were made of cast iron. Concrete wood balconies are common as well. Many buildings have continuous galleries across the front facade with metal or capped roofs.
**Small downtown infill: Auburn**

**THE CASE STUDIES**

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**Step One**

**Step Two**

**Step Three**

**Step Four**

**Step Five**

**What do we need?**

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**ARCHITECTURAL DESIGN STANDARDS**

**AN ARCHITECTURAL PATTERN BOOK CAN BE A USEFUL ADDITIONAL COMPONENT OF THE FORM-BASED CODE. THIS INFORMATION CAN BE USED TO GUIDE OR REQUIRE SPECIFIC ARCHITECTURAL FEATURES AND STYLES.**

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**Small downtown infill: Auburn**

**Form-Based Code Components...Design Standards**

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21 AUGUST 2008

SACRAMENTO AREA COUNCIL OF GOVERNMENTS | FORM-BASED CODE HANDBOOK 137
Proper integration with the existing code

Infill development and redevelopment should be regulated in a predictable manner throughout the planning area to help create a consistent Old Town, Downtown, and residential neighborhood character. Therefore, a form-based code should generally be a mandatory set of standards and guidelines that would apply to all new development. City officials and residents indicated that revision and update of the city zoning regulations would be beneficial. If a general code update proceeds in the future, the city should consider how a form-based code element for Old Town and Downtown could be incorporated into the overall ordinance structure. If an FBC precedes such an amendment, it should be adopted as a separate code section, which would generally supersede the normal underlying zoning standards. In addition, the current design guidelines for Old Town and Downtown, along with the National Historic Register designation for Old Town, must either be incorporated as part of the FBC or carefully integrated with it.

Make it readable

Because of the importance of building form and architecture, the form-based code should be very thoroughly illustrated. Liberal use of illustrations, pictures, and/or diagrams will greatly enhance the community’s understanding of how infill development may successfully complement the character of Old town and Downtown. Existing documents to build upon include the “Auburn Design Workplan Analysis & Proposals,” October 1991, and the “Historic Preservation Architectural Design Guidelines,” revised and adopted by the city, October 2004.

Road test

Once the draft code provisions are completed, they should be tested using past and/or anticipated development applications to determine how well the draft addresses real world development and design issues. Staff should apply the new form-based code and other zoning ordinance procedures and requirements to determine whether the draft code would enable successful plan implementation without being unnecessarily burdensome to the applicant. All staff responsible for development review and approval should be involved in this evaluation including, but not limited to, planning, public works, emergency services, and building officials.

Monitoring performance

After the code provisions have been adopted, their performance should be monitored by staff. The questions used during the initial road test should continue to be asked as development application reviews are completed. Problem areas should be recorded, and an annual update amendment process is recommended.
Greenfield development: Roseville

Characteristics

Many greenfield sites in the Sacramento region are, or have been, in agricultural use, featuring gentle terrain and moderate development limitations. Existing development on these sites often consists of farm operations and rural residences. Existing or planned urban areas abut one or more sides of these sites.

Before annexation, a specific plan is often created to guide development. The street and circulation system, land use, parks and open space, community facilities, and design guidelines are commonly found in the specific plan. The type of development can vary widely depending upon the planning goals of the city of which it will become a part.

One such area is the case study site in the city of Roseville, called Creekview. It is one of several areas west of the downtown that are being planned for future urbanization and annexation into the city.

THE CASE STUDIES

the issues...

common greenfield issues to be addressed with form-based code include:

- Establishing a fine-grained and well-connected street system to allow for multimodal transportation options
- Ensuring that buildings adequately address the street in a manner that creates an attractive public realm
- Designing higher density residential building types that are pedestrian-friendly and transit-oriented in a way that blends into the larger development and provides well-designed transitions
- Reserving adequate sites for neighborhood-serving commercial uses
- Siting of infrastructure, such as stormwater and sanitary systems, in the proper places
- Applying the Blueprint Growth Principles
examples of what the Blueprint Growth Principles could look like in greenfield development...

Buildings that address the street and create an inviting pedestrian experience

A mix of housing types and densities

A high level of multimodal (vehicles, bikes, and pedestrians) connectivity
Greenfield development: Roseville

A wide mix of uses (vertical or horizontal)

Streets designed to be safe and attractive for all users (vehicles, transit, bikes, pedestrians)
most important for Roseville

**Street Design and Connectivity**
A greenfield site offers a tremendous opportunity to provide an appealing and pedestrian-oriented public realm. The form-based code should focus on:

- Using street designs that are more pedestrian-friendly, with wider sidewalks, street trees, on-street parking where possible, and buffering between pedestrian areas and travel lanes.
- Working with agency or department staff responsible for street design and maintenance to establish a balance between accommodating vehicular traffic and providing a pleasant and inviting pedestrian environment.

**Land Use**
To achieve the implementation of Blueprint Growth Principles, the following land use elements would be needed:

- Allowing mixed-use development, including a vertical combination of uses.
- Requiring active ground floor uses (or viable ground floor spaces for commercial activities) along key street frontages and street intersections.
- Allowing a mix of residential densities and building types.

**Site Design and Circulation**
The design should focus on creating pedestrian-scale neighborhoods with walking distances of one-quarter to one-half mile. The form-based code should emphasize:

- Creating a fine-grained street system that offers convenient pedestrian circulation throughout the greenfield site and surrounding development.
- Bringing buildings up to the street frontage.
- Reducing parking standards and requiring that surface parking be located to the rear or side of buildings.
- Orienting building entrances to face the street.
- Designing central mixed-use sites to accommodate higher densities over time.
- Creating neighborhood identity.
The commercial, mixed-use, and residential buildings should have distinctive form that helps create an identity for the neighborhoods and community centers. The form-based code should emphasize:

- Transitions provided by building scale and setback treatments to enhance compatibility between different building types and land uses.
- Ground floor spaces in mixed-use areas designed to support active commercial uses.
- Building design that promotes attractive and safe walking environments.

The form-based code should emphasize:

- Interesting building features and windows facing the street.
- Building features that provide shade and weather protection for pedestrians.
- Buildings designed to reduce energy demand.

The street frontage hybrid form-based code is recommended for greenfield development because it links the design of proposed streets with the buildings that front each street type.

In addition, the building type-based code is recommended to allow a mix of housing types to be provided and to allow flexibility to respond to the market over time.
Define the general planning area and desired outcome

The planning area should be generally defined during this phase primarily to clarify the approximate area affected and the project scope. In this instance, the boundary for Creekview has been established based upon property ownership.
Form-based code organization and regulatory approach

Greenfield sites naturally have the opportunity to begin with an almost limitless range of development options. Likewise, the type of form-based code organization to use is also open. In this case, a land use concept has been developed. The concept responds to a planned major street running north-south through the site (West Side Drive), a second primary street traveling along the southern edge of the site (Blue Oaks Boulevard), a stream corridor, and a wetland area. A form-based code featuring a street-frontage hybrid organization is recommended along the major street frontages to create an integrated design of the roadway and adjoining development. Away from the major street frontages, a building-type based form-based code would be appropriate because it will give the developer an identified range of building designs that can be built in each block or district of the project. This organization gives the developer flexibility to respond to the market as the project phases are constructed over several years.

Project team and primary participants

The project team, including city staff and consultant assistance, should be identified and organized during this step. The property owner/developer is a critical participant, as is the involvement of neighborhood representatives, other property and business owners, and local residents, in creating the form-based code.

TIP

In greenfield development, building-type based form-based code can be a useful tool for cities and the developers by demonstrating how city zoning requirements are met, while leaving flexibility for the developer. For example, in 2001, West Bend Property Company, LLC, developed a building-type based FBC as part of its application for land division and zoning approval from the City of Bend. The “NorthWest Crossing Prototype Handbook and Design Guidelines” provided detail about how 16 building prototypes either met or needed adjustment to meet the city’s zoning requirements. Building types were “pre-approved” by the city, along with a specific subset of building types to be allowed on any given site within the 500 acres. The FBC has enabled the developer to respond to market demand for different housing types over the last seven years. As of 2008, the award-winning development is largely built out.
Analysis of existing conditions

As noted in Section 2, the use of aerial photos, street maps, survey or assessor’s maps, and available GIS maps are essential to cataloging planning area conditions. Natural features, topography, and environmentally sensitive areas are particularly important. A detailed analysis of existing conditions was not conducted as part of the case study, but the general characteristics of the Creekview property are summarized below:

Public realm and street design

Virtually all large greenfield sites will have major streets abutting and/or traveling through them. In this case, West Side Drive is planned to ultimately accommodate as many as 50,000 vehicles per day. This street, along with Blue Oaks Boulevard, will have a major influence upon the character of the planning area.

Site design and circulation

The planned major street alignments, the stream corridor running through the central part of the site, and a wetland area in the northeastern portion of the property begin to define four potential development areas on the site. The open space areas associated with the stream and wetland area continue through planned development to the east and west. Other than West Side Drive and Blue Oaks Boulevard, there are few street connections proposed between Creekview and surrounding developments.

Building form

Buildings in the nearby areas include a mix of single family, multifamily, commercial, and public development. Different building types and uses tend to be segregated, and mixed-use building types are not generally found.

Land use

The existing land use is agricultural and open space. Surrounding land use is predominantly planned for residential development. An existing wastewater treatment plant and energy park are located to the southeast.

Architecture

No unique architectural characteristics have been established.

TIP

As part of the analysis of existing conditions, consider conducting a market analysis to determine the viability of different housing types. Use this information to ensure that the FBC building types and development standards include the full range supported by the market.
Plan and code audit
The relevant plan and code documents should be evaluated as they pertain to the identified planning area. Because a specific plan is not yet developed, and the code provisions may not be identified, the audit should focus on the degree to which past practices have supported the city’s general plan policies and the Blueprint Growth Principles. This audit may be organized according to the five form-based code elements - public realm and street design, site design and circulation, building form, land use, and architecture. The audit will afford the opportunity to evaluate how past practices, such as other specific plans, have performed and to identify how these practices should be modified to better support the principles.

Blueprint checklist...

A greenfield site offers a unique opportunity to create a development that fully supports the Blueprint Growth Principles discussed in Section 2. Greenfield development should pay special attention to the following design elements:

► Fine-grained street grid. Convenient and direct connections are essential for creating a truly pedestrian-friendly transportation system. Long, circuitous routes discourage walking. Buildings should face the street and define the public realm.

► Building frontages and entries facing the street. Buildings are a critical element in creating a functional and pleasant public realm. Building near the street helps create a sense of enclosure that is common to all successful urban places.

► Surface parking located to the rear or side of buildings. Surface parking located between buildings and the street isolates pedestrians between parked and moving cars and offers little to encourage walking in these areas.

► Mixed-use development with active ground floor uses. This is an important element within new neighborhood centers. Building frontages along the sidewalk with blank walls and no activity create boring environments that pedestrians tend to avoid. Windows and entries facing the sidewalk, coupled with active uses such as restaurants, stores, and offices, are essential to create lively and interesting places conducive to walking.

► Orientation to transit. Transit service may not be available initially, but greenfield sites should be designed with future transit in mind. Creating good pedestrian places initially will be an important step in supporting future transit.

► Design for future density. Where possible, mixed-use neighborhood centers should be designed to accommodate higher densities over time. For example, surface parking lots could be located to allow future conversion for additional buildings or parking structures as the market changes to support them.

► Natural resource protection. A greenfield site offers a unique opportunity to maximize protection of important natural features and environmentally sensitive areas.

► Energy efficient buildings. New buildings should be designed to maximize energy efficiency, including good solar orientation to reduce heating and cooling demand.
Community outreach and involvement

A community involvement program should engage city residents and the developer about how the specific plan for a greenfield site should contribute to the city’s overall vision and general plan policies. The purpose of this dialogue is to:

- Validate the planning area boundary, existing conditions analysis, and plan and code audit in Step 2;
- Identify issues to be resolved during Step 3;
- Participate in developing the vision and illustrative plan in Step 3; and
- Help develop the important regulating plan and program to implement the vision in Step 4.

During the December 2007 form-based code workshop in Roseville, the participants identified the following issues, related to Creekview, which are representative of other greenfield situations:

- Establish a method to achieve greater density and mix of uses in response to a changing real estate market.
- Define building types that can be phased in over time in response to the market.
- Identify ways to establish pedestrian and vehicular connectivity in new development as the project phases are completed.
- Define connectivity standards that can be applied through land division and subdivision approval.
- Demonstrate how street, site, and building design may be integrated along major streets, such as West Side Drive.

TIP

Charrettes are an effective way to develop a form-based code approach, assess existing conditions, and perform a code audit, all while involving stakeholders. In situations where the developer is leading the design of a greenfield site and the preparation of a form-based code, charrettes can be useful for bringing together designers and technical experts to reach agreements about issues that will affect the development application. For example, in 2000, West Bend Property Company, LLC, sponsored a series of charrettes or design workshops specifically to bring together the consultant team with the city public works, fire bureau, and planning/permitting representatives. Adjacent property owners were also invited to participate, but because there was only one adjacent residential neighborhood at the time, large-scale public involvement was somewhat limited.

TIP

If there are no neighbors near a greenfield property, a charrette may not involve members of the public. However, charrettes can still be useful for bringing together the development team and consultants with city staff to resolve technical issues. City participants may include representatives from police, fire, traffic, zoning and environmental agencies.
Greenfield development: Roseville

step one ➞ step two ➞ step three ➞ step four ➞ step five

what do we want?

charrettes

what do we want?

charrettes
Strategy A: Emphasis on street design alternatives for a major thoroughfare

This strategy assumes that an alternative design for the major north-south connector through the greenfield is possible, such as a multiway boulevard design. Still carrying 50,000 cars (Average Daily Traffic), the alternative design allows local streets with on-street parking parallel to the major thoroughfare. As a result, storefront retail and even residential uses are viable development types along this street.

A regulating plan would specify where the design/development standards apply and where they are required or optional. A building type regulating plan would identify which building types are allowed along the local street that parallels the major thoroughfare.

TRANSLATING THE VISION INTO A FORM-BASED CODE: THREE STRATEGIES FOR A GREENFIELD COMMUNITY
current land use and street design...

alternative design for major north-south street

ORIENTING BUILDINGS TO THE STREET

TOP: WIDE, AUTOMOBILE-DOMINATED STREETS OFTEN RESULT IN DEVELOPMENT THAT TURNS ITS BACK TO THE STREET.

MIDDLE: THE IMAGE ILLUSTRATES HOW WALLS AND FENCES OFTEN LINE THESE BUSY STREETS IN ORDER TO SHIELD RESIDENTIAL DEVELOPMENT FROM THE UNFRIENDLY STREETSCAPE.

BOTTOM: A WELL-DESIGNED STREET CAN PROVIDE FOR EFFICIENT TRAFFIC MOBILITY WHILE ALSO CREATING A MORE INVITING STREETScape. THIS ENCOURAGES DEVELOPMENT TO FRONT, RATHER THAN TURN ITS BACK ON THE STREET.

translating the vision into a form-based code: three strategies for a greenfield community
Strategy B: Emphasis on the cross streets

This strategy assumes that the primary north-south connector through the area (for the Roseville greenfield site, this is Westside), is designed to carry 50,000 cars (ADT) and is 6-8 lanes with sidewalks or multiuse paths, but no on-street parking is possible, therefore no street-facing retail is possible. Access from this street is limited or nonexistent. Uses fronting the primary north-south connector are exclusively auto-oriented retail, office, and industrial. Buildings are one-story.

At the corners where major neighborhood-connecting streets intersect with the north-south connector, there is an opportunity for pedestrian-friendly street design, on-street parking and street-facing retail. Uses fronting these corners include storefront retail, office, and residential, including office uses and residential on the second level of buildings and above.

The form-based code would establish design and development standards for buildings located at the corners. Standards would emphasize the design of building frontage, landscaping, signage, and location of parking.

In addition, the form-based code would identify building types appropriate for each street—primary north-south connector or neighborhood connector.

A regulating plan would specify where the design/development standards apply and where they are required or optional.

**STRATEGY B**

This alternative strategy assumes that street design of the north-south connector is pre-determined, and identifies neighborhood gateways along it where pedestrian-friendly development might be possible.

**translating the vision into a form-based code: three strategies for a greenfield community**
Strategy C: Emphasis on achieving mixed housing types

This strategy applies to the residential areas away from the major thoroughfare. It assumes that block perimeter and connectivity standards are met and a walkable grid of streets and blocks has been established.

To allow for flexibility to respond to the market over time, the FBC would establish a number of “pre-approved” housing prototypes, from large lot detached single dwellings to small lot single dwellings with accessory dwelling units, to duplexes, to attached single dwellings to flats (apartments).

The FBC would identify several housing prototypes appropriate for each street and/or series of blocks. A building type regulating plan would identify where each building type is allowed or prohibited.

translating the vision into a form-based code: three strategies for a greenfield community
THE CASE STUDIES  Greenfield development: Roseville

step one  ➔  step two  ➔  step three  ➔  step four  ➔  step five

what do we need?

REGULATING PLAN

A STREET-BASED FORM-BASED CODE ESTABLISHES THE CHARACTER AND DESIGN OF THE VARIOUS STREET TYPES WITHIN A COMMUNITY. BUILDING DESIGN AND FRONTAGE STANDARDS ARE THEN BASED ON THE TYPE OF STREET THAT A PROPERTY FRONTS. THE DEVELOPMENT STANDARDS (SEE EXAMPLE ON NEXT PAGE) ARE “KEYED” INTO THE STREET TYPES ACCORDING TO THE REGULATING PLAN.

a street-frontage hybrid regulating plan

form-based code components…regulating plan
**Step One**

- Urban Thoroughfare Commercial
- Neighborhood Commercial
- Neighborhood Residential

**Step Two**

- Public Realm/ Streetscape/ Connectivity
- Site Design and Circulation
- Building Form
- Land Use
- Architecture

**Things to Consider:**

- Establish a fine-grained street system to allow multiple connections between destinations and offer options to the major streets for local circulation. Standards would include minimum spacing for streets and pedestrian access, and maximum block length and perimeter dimensions.

- Develop a design for major streets to allow residential development that may be successfully oriented to these streets.

- Design higher density, mixed-use centers that are pedestrian-oriented and capable of accommodating transit.

**Step Three**

- For each street type, public realm and streetscape and connectivity standards would be specified.

- For each street type, site design and circulation standards would include the location and design of parking, auto access, and landscaping, as well as the location of the buildings on the site.

- For each street type, building form standards would specify the orientation, bulk, height, and massing of buildings.

- For each street type, land use standards would include permitted, prohibited, and conditional uses.
THE CASE STUDIES  Greenfield development: Roseville

step one  →  step two  →  step three  →  step four  →  step five

what do we need?

Garden Street

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River Road Transition Street

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Riverfront View Street

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STREETSCAPE AND BUILDING FRONTAGE STANDARDS

STREETSCAPE AND BUILDING FRONTAGE STANDARDS SUCH AS THOSE SHOWN HERE HELP ILLUSTRATE THE STREET TYPES (THIS PAGE) AND FRONTAGE TYPES (NEXT PAGE) THAT ARE ALLOWED ACCORDING TO THE REGULATING PLAN.

form-based code components...streetscapes and building frontage standards
### Building Frontage Standards are Allocated by Street Type

<table>
<thead>
<tr>
<th>Townhouse Porch</th>
<th>Stoop</th>
<th>Door Yard/Terrace/Light Court</th>
<th>Forecourt</th>
<th>Linear Storefront</th>
<th>Linear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riverfront Promenade</td>
<td>x</td>
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<tr>
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<td>River Road Transition</td>
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<td>Fifth Street</td>
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<td>Garden Street</td>
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<td>Riverfront View Street</td>
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<td>Local Street</td>
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<tr>
<td>Internal Universal Street</td>
<td>buildings not required to front these streets</td>
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</tbody>
</table>

### Building Frontage Standards

**This system has built-in flexibility; the illustrations represent the different options available in identified zones.**

- **Townhouse Porch**
  - A facade which is aligned on or close to the property line with the ground story elevated from the sidewalk to provide privacy for the ground floor uses. The entrance is usually an interior stair or a small door. This frontage type is suitable for ground floor residential uses.

- **Stoop**
  - A facade which is aligned on or close to the property line with the ground story elevated from the sidewalk to provide privacy for the ground floor uses. The entrance is usually an interior stair or a small door. This frontage type is suitable for ground floor residential uses.

- **Door Yard/Terrace/Light Court**
  - A facade which is aligned on or close to the property line with the ground story elevated from the sidewalk to provide privacy for the ground floor uses. The entrance is usually an interior stair or a small door. This frontage type is suitable for ground floor residential uses.

- **Forecourt**
  - A facade which is recessed a central portion of the facade for a portion of the building frontage. The Forecourt frontage should be used in conjunction with other frontage types (Linear or Linear Storefront). A Forecourt is appropriate for residential or commercial uses.

- **Linear Storefront**
  - A facade which is aligned close to or directly on the property line with the building entrance at sidewalk grade. Linear Storefront frontages have substantial glazing on the ground floor, and provide awnings or canopies on the ground floor. Bldg entries must either provide a canopy or awning and/or be recessed behind the front building facade. This frontage is appropriate for commercial retail uses.

- **Linear**
  - A facade which is aligned close to or directly on the property line with the building entrance at sidewalk grade. Linear Storefront frontages have substantial glazing on the ground floor, and provide awnings or canopies on the ground floor. Bldg entries must either provide a canopy or awning and/or be recessed behind the front building facade. This frontage is appropriate for commercial retail uses.
step one ➔ step two ➔ step three ➔ step four ➔ step five

step four what do we need?

building type-based regulating plan

form-based code components...regulating plan
For each building type, **public realm, streetscape and connectivity standards** would specify minimum spacing for streets and pedestrian access, and maximum block length and perimeter standards.

For each building type, **site design and circulation standards** would specify minimum lot size, width and depth, maximum site coverage, all setbacks (including required setbacks for garages), required build-to lines, landscaping, and lighting.

For each building type, **building form standards** would specify orientation, bulk, height, and massing of buildings, minimum window area, and location and design of porches. Emphasis would be on street-facing facades of buildings.

For each building type, **land use standards** would include permitted, prohibited, and conditional uses.
What do we need?

**Step Four**

**Step Five**

**Step Three**

**Step Two**

**Step One**

**THE CASE STUDIES**

**Greenfield development: Roseville**

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**Form-based code components...development standards**

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**Location Summary. All Village Prototypes**

**Village Prototypes**

**V.1 Village Mixed-Use**

Description: This building prototype is intended to accommodate community-serving commercial uses in a village setting. Small scale community-serving commercial uses are encouraged at the ground level. The preferred setback from the front lot line is 10 feet. The area within the front setback, known as the dooryard, is treated with a combination of low shrubs, groundcover plants, and pavers, and is set off from the sidewalk with a low fence of various materials, such as wrought iron, stone, masonry, or wood. Buildings will be mostly two stories fronting the street with a small-scale urban residential character, creating a gracious village ambience and a pedestrian-friendly environment. Street-facing facades will be a combination of tall gable ends, a flat roof behind a parapet, a "false front," or a roof sloping to the street with prominent gable dormers. Accessory dwelling units are allowed. Non-residential parking is allowed to the sides of buildings, although the preferred location for all parking, residential and non-residential, is at the rear of the lot, off of an alley.

**V.2 Village Apartment**

Description: This building prototype is intended to accommodate residential multiple-family uses in an village setting, in the form of multiple buildings arranged around a shared landscaped green or courtyard, a building type commonly called a garden apartment. The preferred setback from the front lot line is 10 feet, and buildings may cover up to 60% of the lot. The area within the front setback, known as the dooryard, is treated with a combination of low shrubs, groundcover plants and pavers, and is set off from the sidewalk with a low fence of various materials, such as wrought iron, stone, masonry, or wood. Buildings will be mostly two stories fronting the street with a small-scale urban residential character, creating a gracious village ambience and a pedestrian-friendly environment. Street-facing facades will be a combination of tall gable ends, a flat roof behind a parapet, a "false front," or a roof sloping to the street with prominent gable dormers. Parking is located at the rear of the lot, off of an alley.

**V.3 Village Townhome**

Description: This building prototype is intended to accommodate residential uses in a townhome building. Buildings are required to be attached, however, no fewer than two, and no more than four townhomes shall be attached without a sideyard or passageway. The preferred setback from the front lot line is 10 feet. The area within the front setback, known as the dooryard, is treated with a combination of low shrubs, groundcover plants and pavers, and is set off from the sidewalk with a low fence of various materials, such as wrought iron, stone, masonry, or wood. Buildings will be mostly two stories fronting the street with a small-scale urban residential character, creating a gracious village ambience and a pedestrian-friendly environment. Street-facing facades will be a combination of tall gable ends, a flat roof behind a parapet, a "false front," or a roof sloping to the street with prominent gable dormers. Parking is located at the rear of the lot, off of an alley.
Greenfield development: Roseville

THE CASE STUDIES

step one → step two → step three → **step four** → step five

**what do we need?**

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**form-based code components...development standards**

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**Village Mixed-Use, Key Map**

- **Typical building footprint**
- **Maximum building envelope**
- **Axonometric view of typical building**
- **Site Plan**

**Village Prototypes**

- **Description:** This building prototype is intended to accommodate community commercial, live/work and residential uses in a village setting. Small scale community-serving commercial uses are encouraged at the ground level. The preferred setback from the front lot line is 10 feet. The area within the front setback, known as the dooryard, is treated with a combination of low shrubs, groundcover plants and pavers, and is set off from the sidewalk with a low fence of various materials, such as wrought iron, stone, masonry or wood. Buildings will be mostly two stories fronting the street with a small-scale urban residential character, creating a gracious village ambience and a pedestrian-friendly environment. Street-facing facades will be a combination of tall gable ends, a flat roof behind a parapet, a "false front," or a roof sloping to the street with prominent gable dormers. Accessory dwelling units are allowed. Non-residential parking is allowed to the sides of buildings, although the preferred location for all parking, residential and non-residential, is at the rear of the lot, off of an alley.

- **Use:** Residential, live/work townhomes and apartments, and community commercial.
Proper integration with the existing code

Previous greenfield sites have been planned and developed through the specific planning process. This is the intended course for the Creekview site. Because the type of development will be unique to the site, a separate plan and ordinance provisions would be appropriate. The West Roseville Specific Area Plan would be a good example to follow regarding this organizational approach. Following the design process with the developer and community, the FBC should be adopted for the site as a mandatory requirement.

Make it readable

The West Roseville Specific Area Plan is a good example for the city to emulate. It is clear, plan concepts are well-articulated, and the graphics appropriately support the plan narrative. The FBC should continue with this general presentation style.

Road test

Once the draft code provisions are completed, they should be tested using past and/or anticipated development applications to determine how well the draft addresses real world development and design issues. Staff should apply the new form-based code and other zoning ordinance procedures and requirements to determine if the draft code would enable successful plan implementation without being unnecessarily burdensome to the applicant. In addition to planning, public works, emergency services, building inspection, and other agency staff, this exercise should involve the developer. This will offer an excellent opportunity for the city and developer to resolve any final issues and design or development details prior to adoption.

Monitoring performance

After the code provisions have been adopted, its performance should be monitored by staff. The questions used during the initial road test should continue to be asked as development application reviews are completed. Problem areas should be recorded, and an annual update amendment process is recommended.

Road Test: It will be particularly helpful to include the developer in the road test exercise in order to bring additional focus to possible regulatory pitfalls hidden in the draft form-based code. This will allow the city and developer to address potential problems before the code is adopted.
Blueprint Growth Principles - Developed during the Sacramento Region Blueprint Transportation-Land Use Study, these seven principles describe the attributes of Smart Growth practices. They address: providing transportation choices, mixed-use developments, compact development, housing choice and diversity, using existing assets, design for quality, and natural resources conservation.

Charrette - As applied to community planning, a charrette is an intensive and collaborative design workshop where citizens, community leaders, and others come together over two or more days to harness the ideas, talents, and energy of all participants to create and support a feasible plan and implementation strategy.

Conventional zoning - Often referred to as Euclidian zoning in reference to an early 20th century zoning court case, this is the most common form of land use regulation in the country. It is characterized by the segregation of land uses into specific geographic districts. Dimensional standards, such as building setbacks and heights, are included, but regulation of development form and design is typically not emphasized.

Density - This refers to the number of residential dwellings per area of land. This is commonly expressed by minimum lot sizes for dwellings or number of dwellings per acre.

Floor area ratio (FAR) - The amount of floor area in relation to the amount of site area, expressed in square feet. For example, a floor area ratio of 2 to 1 means there are two square feet of floor area for every one square foot of site area. For example, this could translate into a two-story building covering the entire site, a four-story building covering one-half of the site, or some corresponding combination of building floor area.

Form-based code (FBC) - A method of regulating development to achieve a specific urban form. Form-based codes create a predictable public realm primarily by controlling physical form, with a lesser focus on land use, through city or county regulations (Form-Based Code Institute).

Form-based code regulations (mandatory, floating, optional) - A mandatory FBC refers to one where the requirements apply to all development within an identified geographic area. A floating FBC is an arrangement where the requirements are adopted, but not applied to specific properties. The city or county may apply the floating FBC requirements to a variety of areas, which meet predetermined characteristics, such as minimum site area, specific areas or neighborhoods within the jurisdiction, or identified redevelopment areas. An optional FBC is an arrangement where developers may chose to use FBC standards in place of the normal conventional zoning requirements. This arrangement typically involves incentives to encourage use of the FBC over the conventional requirements.

General plan - California law requires that each county and city in the state develop and adopt a general plan. The general plan consists of a statement of development policies and includes a diagram or diagrams and text articulating the long-term plan for the physical development of the county or city. There are seven state-mandated elements, which are: land use, open space, conservation, housing, circulation, noise, and safety. Communities may include additional plan elements.
Greenfield – An undeveloped site that is typically in a natural state or in agricultural or forestry use.

Guidelines – These are code provisions that are not mandatory. However, the developer is expected to make a good faith effort to comply with them.

Illustrative plan – This is a drawing that illustrates the vision for the planning area. It will typically include the community layout, featuring the locations of primary features, such as neighborhoods, districts, corridors, civic buildings, and open space.

Mixed-use development – A property that has more than one type of land use, is considered to be a mixed-use development. The arrangement of different uses may be vertical, such as residential units above ground floor retail, or horizontal, with office adjacent to retail.

Public realm – This includes all public spaces – streets, sidewalks, plazas, open space, and parks.

Regulating plan – Based upon the illustrative plan, the regulating plan assigns the FBC standards to specific locations within the plan area. Regulating plans commonly include maps, graphics and illustrations, and text to describe the requirements that apply to new development.

Specific plan – In addition to the general plan, a city or county may develop one or more specific plans to address planning issues on a neighborhood or district level. Specific plans may set forth policy and implementation strategies for such elements as land use, transportation, urban design, and public facilities. They must be consistent with the general plan.

Standards – These are code requirements that must be met. They are generally used for development and design elements that are (1) essential for successful plan implementation and/or (2) relatively easy to apply, with clear and objective language.

Streetscape – As part of the public realm, streetscapes contain three primary zones: (1) the roadway (travel lanes, medians, bike lanes, and on-street parking); (2) the sidewalk (walkway, street trees, planter strips, street furniture, kiosks, and other amenities); and (3) the building edge (building entrances, windows, awnings, distinctive architectural elements, landscaping, and parking).

Vision – An early outcome of a planning process, which provides a vivid, idealized description of a desired outcome that inspires and energizes a community to realize a better future. It includes a vision statement and may also have supporting graphics to further define it.
Reference/Bibliography

SACOG and the Handbook consultant team is very grateful to the following cities and firms who allowed their form-based codes to be used throughout the Handbook to illustrate key concepts (listed in order of appearance in the document):

- Station Area Form-Based Code, Farmers Branch, TX (pages 36-39). Firm/author: Ferrell Madden Associates. For more information visit: http://www.ci.farmers-branch.tx.us/Planning/stationareacode.html
- Downtown Mixed Use Master Plan, City of Benicia, CA (pages 50-51). Firm/author: Opticos. For more information visit: http://beniciaca.govoffice2.com/index.asp?Type=B_BASIC&SEC=(B60A2F62-3CAC-404A-A638-3E732E96518C)&DE={4ED61EC3-B33C-444C-AB2D-0E3E34D417A}
- Pre-Charrette Catalog for the Santa Ana Renaissance Specific Plan, Santa Ana, CA (pages 62-64). Firm/author: Moules & Polyzoides. For more information visit: http://www.ci.santa-ana.ca.us/pba/planning/Renaissance_Specific_Plan.asp
- Central City Design Guidelines, (page 72), Portland Bureau of Planning, Portland, OR. For more information visit: http://www.portlandonline.com/planning/index.cfm?c=34250
- City-wide Form-Based Code, Rancho Cordova, CA (page 118). Firm/author: SERA + Urbsworks Urban Design.

Additional Resources


Form-Based Codes Institute: http://www.formbasedcodes.org/


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Sacramento Area Council of Governments (SACOG)
Mike McKeever, Executive Director
Ken Hough, Director of Community Planning
Gregory R. Chew, Senior Planner (Project Manager)
Kacey Lizon, Senior Planner

David Evans & Associates
David Knowles

SERA Architecture & Urban Design
Marcy McInelly, AIA
Michelle Marx
Ben Nielsen

PB Placemaking
Keith Liden, AICP

Case Study Cities:

City of Citrus Heights
Janet M. Ruggiero, FAICP, Community Development Director
Colleen McDuffee, Planning Manager

City of Sacramento / Alkali Flat neighborhood
William R. Crouch, AIA, FRAIA, NCARB, Development Services Urban Design Manager
Greg Taylor, Senior Urban Designer

City of Auburn
Will Wong, Community Development Director

City of Roseville
Kathy Pease, AICP, Planning & Redevelopment Senior Planner
WHAT WE DO

The Sacramento Area Council of Governments (SACOG) is an association of Sacramento Valley governments formed from the six regional counties—El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba—and 22 member cities. SACOG’s directors are chosen from the elected boards of its member governments. SACOG’s primary charge is to provide regional transportation planning and funding, as well as a forum for the study and resolution of regional issues. In this role, SACOG prepares the region’s long-range transportation plan; approves distribution of affordable housing around the region; keeps a regionwide database for its own and local agency use; helps counties and cities use federal transportation funds in a timely way; assists in planning for transit, bicycle networks, clean air and airport land uses; and has undertaken the Blueprint Project to link transportation and land development more closely. SACOG has an annual operating budget of about $12.8 million, funded from local, regional, state and federal transportation funds. It has a staff of about 50, including employees and consultants.

EXECUTIVE STAFF

Mike McKeever
Executive Director

Peter Hathaway
Director of Transportation Planning

Kenneth Hough
Director of Community Planning & Operations

Karen Wilcox
Director of Finance

Gordon Garry
Director of Research and Analysis